

PULP & PAPER

APRIL 1951

Vol. 25

No. 4

"The Cellulose Age"

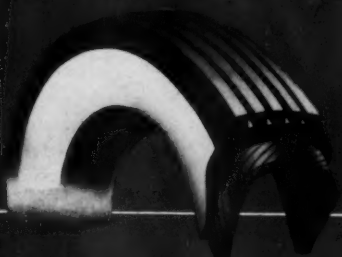


THE POTLATCH WAY—AIR VIEW REVEALS WOOD USE INTEGRATION

On Clearwater River bend (top left) is new Pulp-Paper Mill. Next to right: Veneer Plant; Lumber Storage. Across tail race: Lumber Divisions. Plane was above Lewiston, Idaho, and Clarkston, Wash., and Snake-Clearwater Rivers junction (complete story inside).



*Chemical yarns and fibers
for all types of weaving, apparel
and household furnishings*



*Strong, tough, low cost
and fabric for longer wear,
greater safety, and lower cost*



*Cellophane and cellulose acetate
transparent packaging materials*

HIGHLY PURIFIED WOOD CELLULOSE

Chemically derived from trees

is a basic raw material from which the products
shown here are made.

Rayonier supplies a number of types of wood cellulose,
each specially developed to produce
best results in conversion to these
and many other articles.

RAYONIER

INCORPORATED

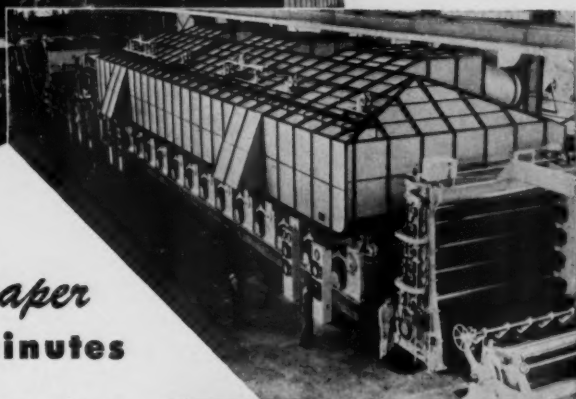
Producers of highly purified wood cellulose for textiles, tire cord, cellophane, plastics

EXECUTIVE OFFICES:

111 East 42nd Street,
New York 17, N. Y.

MILLS:

Houston, Fort Angeles,
Shelton, Washington,
Fernandina, Florida



Saleable paper in a matter of minutes



The ability of a Black-Clawson board machine to produce saleable paper in a matter of minutes from start-up is not just "horseshoes." It invariably happens so it must be based on something far more substantial than just luck—and it is—on the following facts:

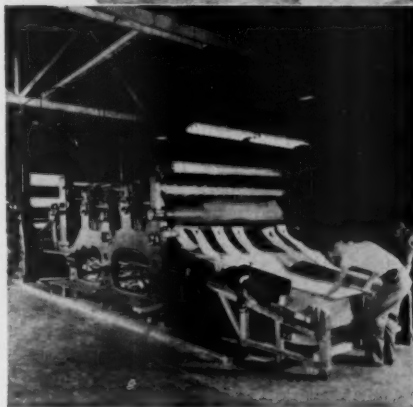
Certain exclusive design features.

Exceptionally close engineering and shop supervision.

Pre-erection and match-marking of parts to speed erection at the mill and assure perfect fit of all components.

That's why Black-Clawson machines "get down and go" on start-up day.

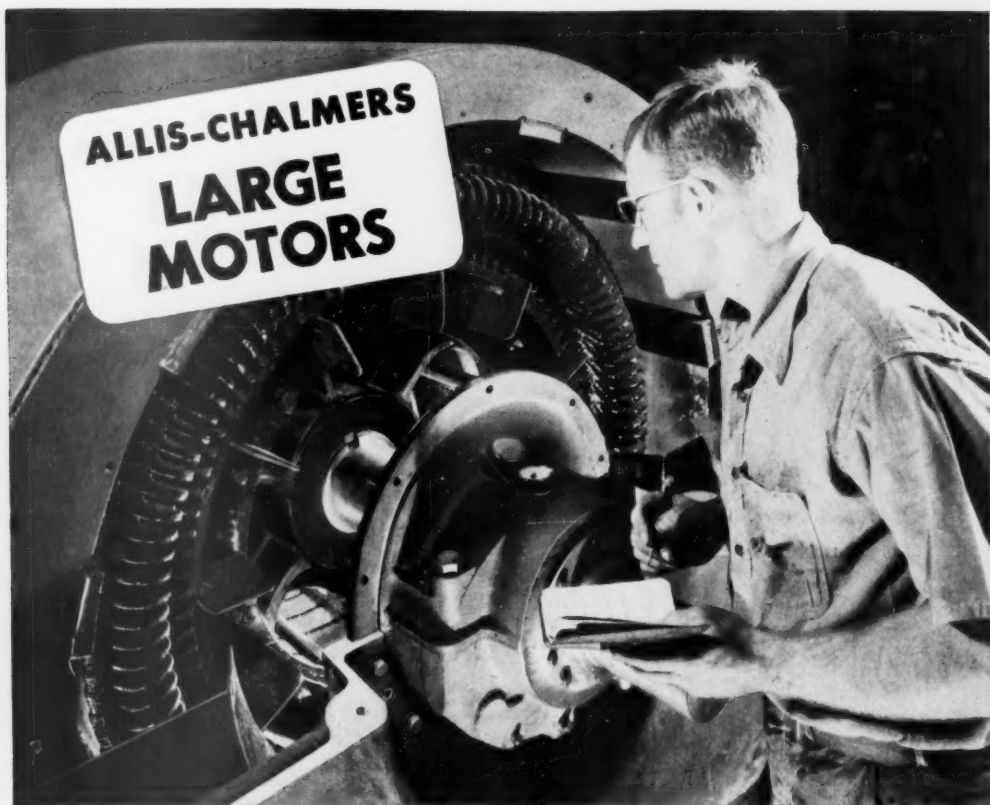
Cylinder machines. Fourdrinier machine drives. Calenders, Reels, Cutters, etc.



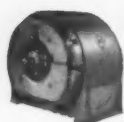
THE BLACK-CLAWSON CO.

HAMILTON, OHIO

Divisions: SHARTLE BROS. MACHINE CO., Middletown, Ohio
DILTS MACHINE WORKS, Fulton, New York
Western Sales Office: Mayer Bldg., Portland, Oregon
Southern Sales Office: 937 Coventry Road, Decatur, Georgia
Associate: ALEXANDER FLECK LIMITED, Ottawa, Canada
Subsidiary: B-C INTERNATIONAL, LTD., Greener House
66/68 Haymarket, London, S. W. 1, England



HOW'S THIS FOR Accessibility?



ONE MAN can perform all routine maintenance jobs on this brand new line of Allis-Chalmers large motors. He can remove the upper halves of the end brackets and air baffles and reach right inside the motor with his vacuum cleaner or air hose. There is plenty of room to reach up back of the stator core through air discharge openings in the stator yoke.

Bearings Protected

The capsule-type sleeve bearings need not be opened up and exposed when the end bracket halves are removed. The bearings are protected from abrasive dust and dirt while the motor is being cleaned. This eliminates the work usu-

ally required to dismantle the bearing, clean and reassemble it during routine maintenance.

Easy Installation

Large stator air discharge openings with removable louvers allow ample room to use an electric or air drill for doweling and bolting the motor to the foundation. These large discharge openings plus adequate air intake openings in the end bells provide cooling air at low velocities.

Sleek Appearance

You'll be proud of the appearance of

the new Allis-Chalmers motor in your plant, too. Clean, simple lines and smooth contours give outward confirmation of its inner strength.

These new design Allis-Chalmers drip-proof and splash-proof bracket bearing squirrel-cage induction motors are built in sizes from 60 hp at 300 rpm to 1500 hp at 1800 rpm. Ask your Allis-Chalmers representative to show you the details of this exceptional new motor or write Allis-Chalmers, Milwaukee 1, Wisconsin for Bulletin 05B7542.

A-3251



ALLIS-CHALMERS

for

WHITEST

WHITES



Our complete line of dyestuffs for paper contains three groups specifically intended for producing the whitest whites

SOLUBLE DYESTUFFS

for unbleached fibers

SOLAR COLORS

for bright fast shades

INDANTHRENE DYESTUFFS

for the ultimate in permanence



Our nearest office will be glad to discuss these colors with you and furnish any samples and formulas you desire.

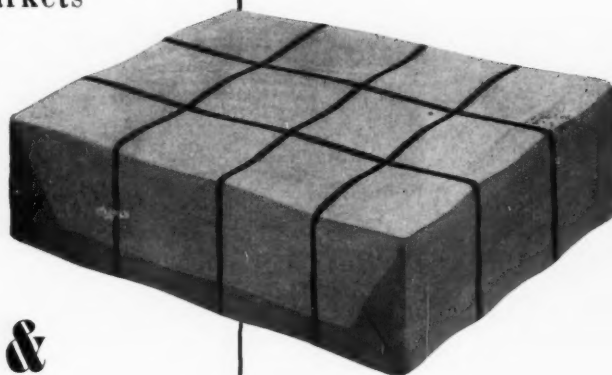


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Lyddon & Co.

exporters of wood pulp
to all world markets



Parsons & Whittemore

paper exporters
wood pulp

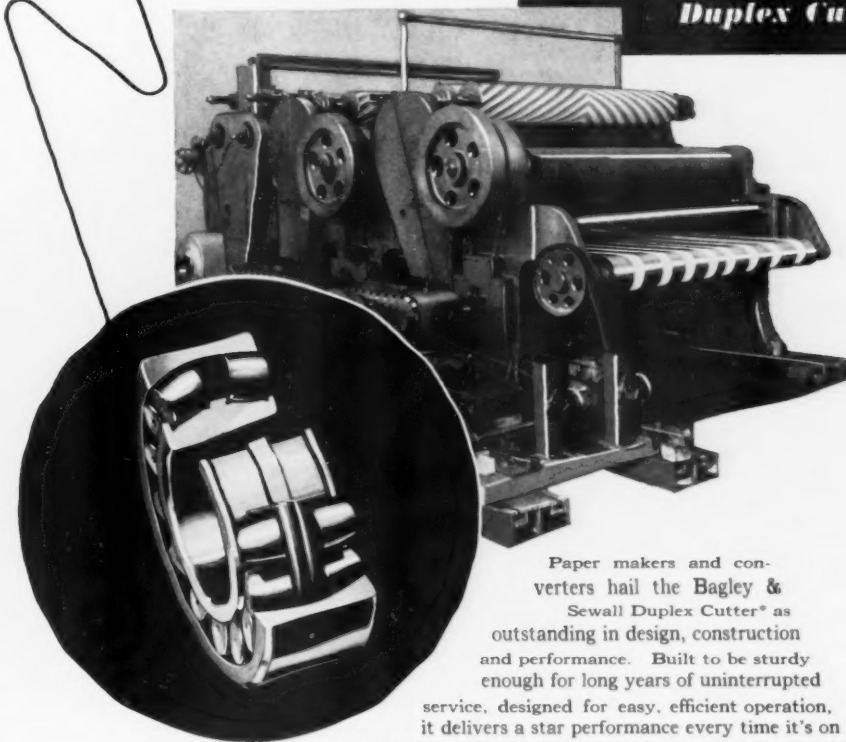


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10 East 40th Street, New York 16, N. Y.

SLIT IT CLOSER CUT IT CLEANER

*with a Bagley & Sewall
Duplex Cutter*



Paper makers and converters hail the Bagley & Sewall Duplex Cutter* as outstanding in design, construction and performance. Built to be sturdy enough for long years of uninterrupted service, designed for easy, efficient operation, it delivers a star performance every time it's on the job. Cuts are clean, edges even, and it runs with watch-like smoothness. And contributing to such outstanding performance are SKF Spherical Roller Bearings, on the feed roll and cutter. Throughout the paper-making field, designers and builders of equipment have found SKF can always be relied upon to help put the right bearing in the right place. Their example is a good one to follow.

7219

*For complete information write the Bagley & Sewall Company, Watertown, N. Y.



SKF
BALL AND ROLLER BEARINGS

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
—manufacturers of SKF and HESS-BRIGHT bearings.

**pipng maintenance
costs more
now!**

**You do less of it
by using Dependable Quality
CRANE VALVES**

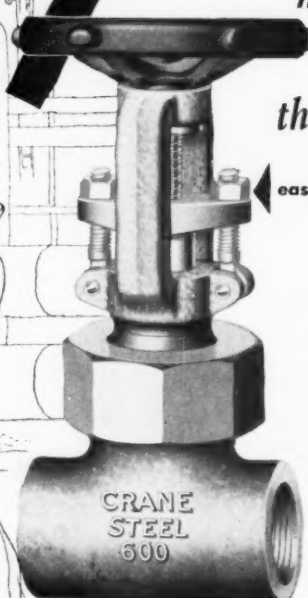
*...That's why
more Crane Valves
are used
than any other make*

easy to use...easy to keep on the job

You'll have much less valve maintenance wherever you install Crane 600-Pound Small Steel Gates. Use with recommended trim on oil or oil vapor, steam, water, air, or gas.

Compact yet rugged—light yet strong—these are truly small steel valves with big valve features. They sacrifice nothing that insures dependability and tight seating, easy operation, and convenience in keeping them in top-notch working condition.

Supplied in sizes 2 inches and smaller, No. 3602 valves are engineered to the standards that make Crane Quality your best choice in valves of every type.



No. 3602 Small Steel Gate Valve

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CRANE CO., General Offices:
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All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

LESS DOWNTIME . .

MORE PAPER

with

ADAMS

AUTOMATICALLY FILTERED WATER



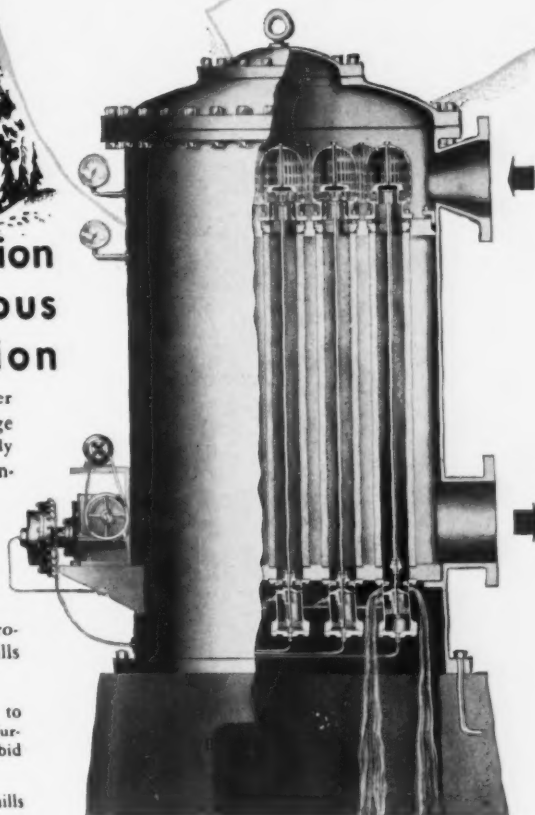
**Continuous protection
for your continuous
machine operation**

Higher production goals of today's faster machines must be protected—continuously. Large volumes of water, carrying proportionately larger amounts of impurities, need more attention than ever before.

Clean, automatically filtered water can eliminate down time due to plugged shower nozzles, helps avoid mid-week shutdowns for washing clogged felts.

Experience with Adams Poro-Screen and Poro-Stone Water Filters in pulp and paper mills from coast to coast has proved:

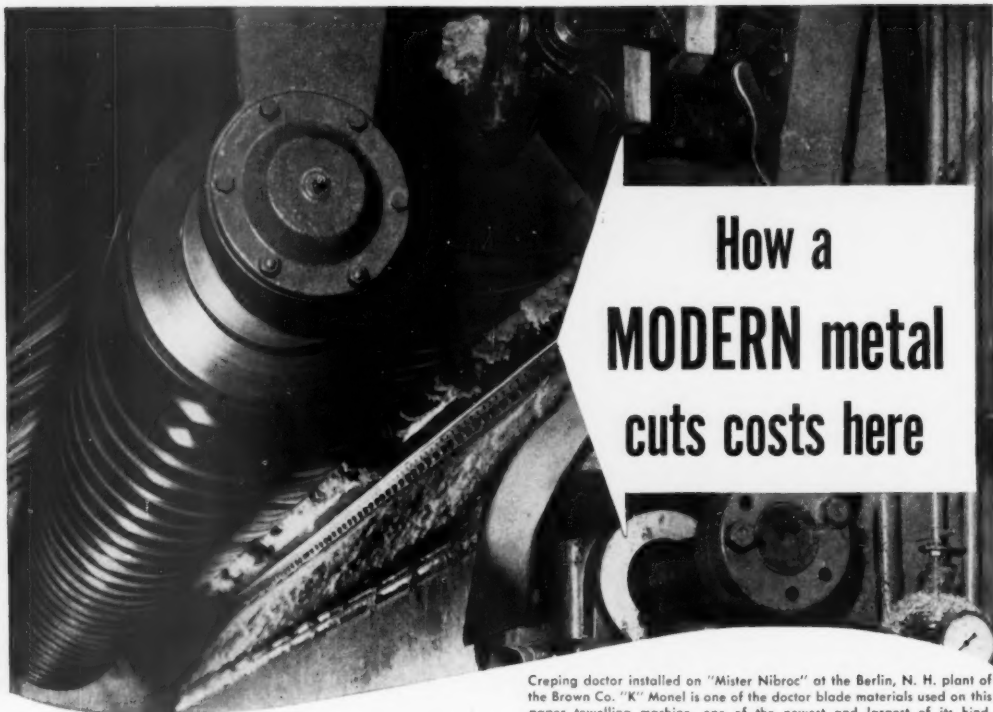
- 1** Continuous filtration can be relied upon to remove all objectionable impurities, even during seasonal conditions of highly turbid supply.
- 2** Production continues in Adams-equipped mills when others using the same water source are shut down for cleaning.



Write for your copy of the new 20 page booklet on water filtration in the Pulp and Paper Industry, Bulletin No. 691.

R. P. ADAMS COMPANY, INC.

210 EAST PARK DRIVE, BUFFALO 17, N. Y.



How a MODERN metal cuts costs here

Creping doctor installed on "Mister Nibroc" at the Berlin, N. H. plant of the Brown Co. "K" Monel is one of the doctor blade materials used on this paper towelling machine, one of the newest and largest of its kind. The creping doctor and "K" Monel creping blades were made and furnished by LODDING ENGINEERING CORP., Worcester, Mass.

Wear and corrosion...worst enemies of your doctor blades...can be controlled.

The secret of long-lasting, low-maintenance blades lies in using a metal that fits your operating conditions.

"K" Monel is just such a metal. Consider its unique combination of desirable properties:

- Non-rusting, highly corrosion-resistant.
- Strength and hardness greater than structural steel.
- Heat-treatable for maximum properties.
- Easy to machine; takes a high polish.

So much for theory. Now...what about practice?

Many of the nation's busiest board and paper mills report outstanding service from

"K" Monel doctor blades, in both dry and wet end applications.

"K" Monel blades, operating on modern high-speed paper machines, have given up to 18 times longer service than blades of other commonly used metals. Less honing and less regrinding are required. Corrosion ceases to be a threat to blade life. Maintenance costs drop sharply.

Right now, diversion to America's defense program has limited the supply of "K" Monel for civilian use.

Ask your nearest source of supply about the current availability of "K" Monel, or for more detailed technical information.

* Reg. U. S. Pat. Off.

THE INTERNATIONAL NICKEL COMPANY, INC.

67 Wall Street, New York 5, N. Y.



"K" MONEL...FOR MINIMUM MAINTENANCE



JUST OFF THE PRESS

*Bulletin #9041... 32 pages of data,
photos and drawings in color describing the Dorrco Hydro-
Treator... the high-rate water treatment unit that
gives these results*

PLANT	JUNCTION CITY, KANSAS	LOCKLAND, OHIO	APPLETON, WISCONSIN	A CANADIAN PAPER CO.	T.V.A., SHEFFIELD, ALABAMA
OPERATION	SOFTENING	SOFTENING	SOFT. COLOR & TURB. REM.	COLOR REM.	ALGAE & COLOR REM.
NO. & SIZE OF UNITS	2-35' DIA.	1-31' DIA.	1-45' DIA.	2-80' DIA.	1-50' DIA.
CAP. PER UNIT, M.G.D.	1.5	1.0	3.1	10.0	3.0
GAL/SQ. FT./MIN.	1.00	.93	1.35	1.34	1.07
AVG. TURB. EFF. PPM	LESS THAN 0.2	3.0	2.4 TO 4.7	3 TO 5	4 TO 7
SLUDGE-% SOLIDS	35 TO 46.5	24.9 TO 39.2	16.7	--	--

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There's no obligation.



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These 10 BIG Features Make Western Precipitation COTTRELLS Outstanding in the Paper Industry

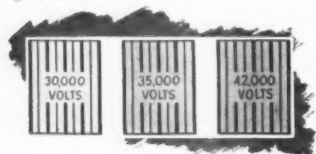
When considering COTTRELL Equipment for salt cake recovery, or any other application in the paper industry, remember this . . . Western Precipitation Corporation not only pioneered the first commercial application of COTTRELL equipment made in any industry, but also pioneered the first application of COTTRELL equipment in the paper industry.

Among the vitally important advantages found in Western Precipitation COTTRELLS, the following are particularly important in paper mill installations . . .

1 Sustained Year-After-Year Efficiency: The recovery efficiency of Western Precipitation COTTRELLS does not fall off in service. All parts are of ample design to maintain guaranteed over-all efficiency year after year—not for just a single acceptance run.



2 Higher Recovery: The horizontal flow design of Western Precipitation COTTRELLS eliminates collected material falling countercurrent to incoming gas stream. This assures higher recovery, minimum resuspension of recovered material in gas stream.

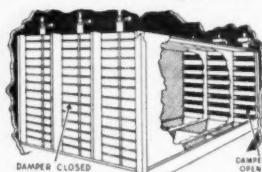


3 Maximum Performance: Horizontal flow of Western Precipitation COTTRELLS permits use of multiple electrical sections so that voltage in each section can be varied to dust loading for maximum recovery without arc-over or electrical breakdowns.

4 Lower Over-all Cost: When comparing COTTRELL costs, be sure to compare total installed cost, including duct work.

5 Simpler Maintenance: Because all interior parts and electrode systems are readily accessible, Western Precipitation Cor-

porelles are far easier to maintain and service. Saves "down" time, saves repair costs.



6 Greater Adaptability: Horizontal flow design permits use of multi-vane dampers in multiple-unit installations. Thus, one unit can be shut off completely to permit maintenance operations without closing down entire Precipitator. Also, the dampers can be used in slightly-closed position to assure more uniform gas distribution.

On single unit installations, chain curtains assure uniform distribution of gases. Curtains are easily kept clean by shaker mechanisms provided.

7 "V"-Shaped Hoppers: Horizontal design permits use of continuous "V"-shaped hoppers for collecting recovered material. Steeply-sloped walls in this type of hopper prevent build-up or bridging of recovered material.

8 Space-Saving Compactness: Not only do their horizontal design permit maximum compactness in Western Precipitation COTTRELLS, but various sections of a unit can be

arranged for indoor installation in space above cascade evaporators, thus utilizing space otherwise wasted.


9 All-Weather Construction: Western Precipitation COTTRELLS are built for both indoor or outdoor installation, and this organization has had extensive experience with special construction to prevent excessive corrosion in rigorous northern climates.

10 More Extensive Experience: Since pioneering the commercial application of COTTRELL Precipitators over 42 years ago, Western Precipitation has consistently led in developing one unique advancement after another. Such features as 4-Point Electrode Suspension that eliminates misalignment of electrodes and reduction in recovery efficiencies . . . Unusually Rugged Rapper Design that assures proper cleaning of electrodes . . . Extensive Experience with all types of electrode designs . . . and many other advantages assure you the ultimate in COTTRELL design and efficiency when you bring your recovery problems to Western Precipitation engineers.

Without obligation our nearest representative will gladly make Western Precipitation COTTRELL experience available to you for solving your particular recovery problem. Why not contact him today?

IMPORTANT! In addition to COTTRELL Electrical Recovery equipment, Western Precipitation Corporation also designs and installs the well-known MULTICLONE Mechanical Collectors for hogged-fuel fired boilers. These units are unusually compact, highly efficient and can be readily fitted into existing plants at minimum installation costs. Write for details!

Send for Helpful Literature



WESTERN Precipitation CORPORATION

ENGINEERS, DESIGNERS & MANUFACTURERS OF EQUIPMENT FOR
COLLECTION OF SUSPENDED MATERIALS FROM GASES & LIQUIDS

Main Offices: 1070 WEST NINTH STREET, LOS ANGELES 15, CALIFORNIA
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PRECIPITATION CO. OF CANADA, LTD., DOMINION SQ. BLDG., MONTREAL



VALUE in a fine product reflects
the experience and skills of its makers.

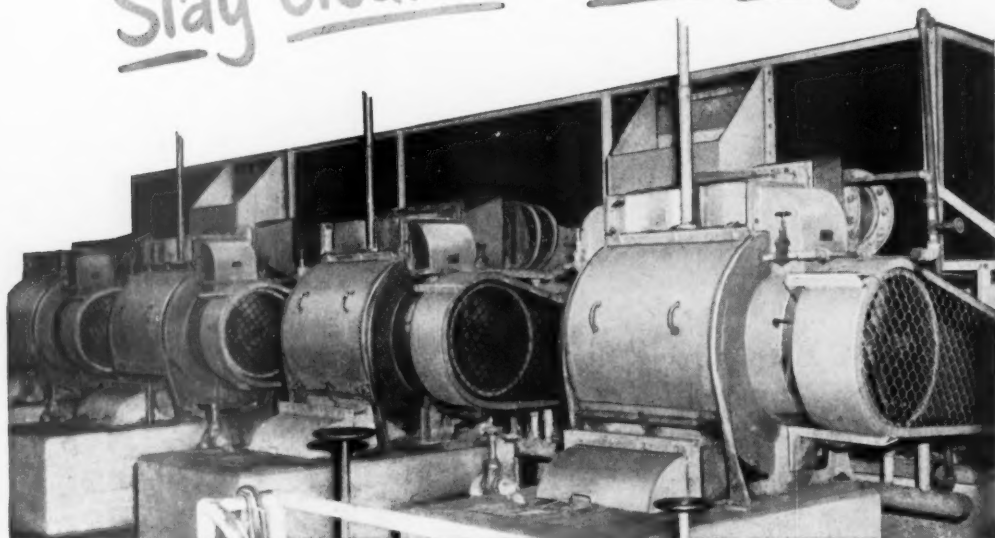
VALUE in Fourdrinier wires is a matter of record...paper quality and production records in mills throughout America reflect the fact that *Appleton Wires are Good Wires!*



APPLETON WIRE WORKS, INC.
APPLETON • WISCONSIN

Want boxes that

Stay cleaner... last longer?



Chemstone headbox for rotary screens in use at the Halifax Paper Company Mill, Roanoke Rapids, N. C.

Build them with **CHEMSTONE**



You'll look a long way before you find a material for headboxes, consistency regulator boxes or flow boxes that stands up better than Chemstone* under the tough operating conditions of a hard-driven paper mill.

There are three basic reasons why Chemstone boxes stay cleaner and last longer:

Chemstone resists slime and bacteria. When flushing is necessary (as in the handling of some groundwoods) Chemstone boxes are easily cleaned by the simple process of hosing down.

Chemstone won't shrink or swell. Made of asbestos and cement, and integrally water-proofed, Chemstone has unusual dimensional

stability. It is lightweight—yet exceptionally strong and durable . . . builds neat-looking boxes that last indefinitely.

Chemstone resists chemical action. Like all Johns-Manville asbestos-cement products, Chemstone is free from metallic oxides . . . resists both mild alkalis and acids. Chemstone boxes are unaffected by most mill waters.

Why not give Chemstone a chance to provide better boxes for *your* mill? It comes in sheets 48" x 96", in thicknesses from 1/4" to 1 1/4" . . . and is easy to work with ordinary metal-working tools. For further information, write for data sheet DS series 405. Address Johns-Manville, Box 290, New York 16, N. Y. In Canada, 199 Bay Street, Toronto, Ontario.

*Reg. U. S. Pat. Off.



Johns-Manville **CHEMSTONE**

MAKES BETTER BOXES



Not everybody takes a "Regular"

As a matter of fact, some men can't find a really perfect fit unless they have their suits tailor-made.

It's that way with the supplies you buy, too. For instance, we have a complete line of standard starches and other corn products for paper mill use; but we are *also* set up to provide you with any *special* formula or product, *tailor-made* to your specifications.

And... standard or special... you'll want to buy from a company like Anheuser-Busch, whose reputation for products of highest quality, uniformity and dependability is as dominant in the paper industry as it is with retailers and consumers all over the world.

CORN STARCHES

DEXTRINES

GUMS

CORN SYRUPS



FOR FURTHER INFORMATION PHONE OR WRITE

ANHEUSER-BUSCH, INC.

CORN PRODUCTS DEPARTMENT

ST. LOUIS, MO.

Tomorrow's pulp and paper depend on TODAY'S trees



EVEN AIRPLANE SPRAYING...

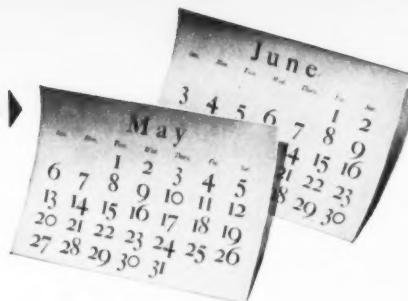
IS ONLY EFFECTIVE IN MAY AND JUNE

THE SPRUCE BUDWORM IS A "TOUGH CUSTOMER"

His metamorphosis and feeding habits are such that in any given locality the period for effective spraying lasts only about two weeks . . . and these vulnerable periods are limited to the months of May and June. No ordinary spraying for him . . . he deserves special treatment!

To help put the budworm in his place, Pennsalt gladly cooperated with other interests, as well as state and federal authorities, by developing a special forest spray—low enough in cost to permit the fast, wide-area spraying required, high enough in toxicity to give a 97% kill.

Since the battle against the budworm is likely to be a long one, additional support from every quarter will be helpful.



In the West:

Pennsylvania Salt Manufacturing Company of Washington . . . Tacoma, Washington; Portland, Oregon; Berkeley and Los Angeles, California.

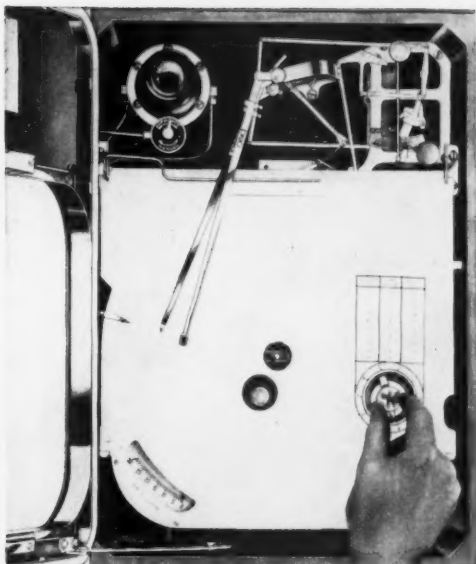
In the East:

Pennsylvania Salt Manufacturing Company, Philadelphia 7, Pa.

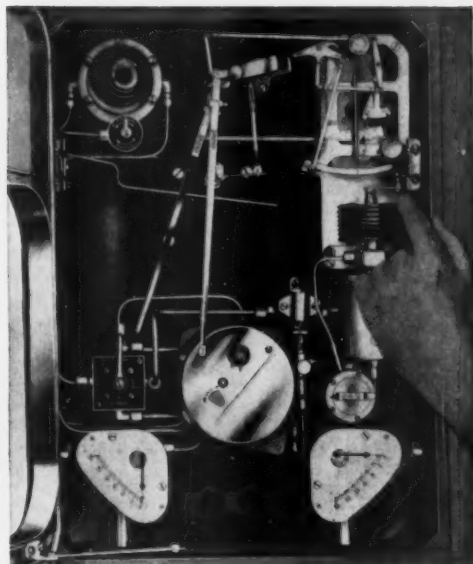
Liquid Chlorine • Caustic Soda • Bleaching Powder • Potassium Chlorate • Sodium Chlorate • Anhydrous Ammonia • Perchloron® • Sodium Arsenite • Sodium Hypochlorite.



Progressive Chemistry for Over a Century



EASIEST TO PUT INTO OPERATION—Calibrated control actions save hours of shutdown. Reset, derivative and proportional values can be exactly reproduced at any time on the same or any other Series 500 controller . . . merely by duplicating the setting. Thus: controller adjustments can be standardized for any process throughout a plant or national organization.



EASIEST TO SERVICE—Inherently simple design, using the fewest possible parts, plus extremely close-tolerance manufacturing . . . make the instrument thoroughly interchangeable, trouble-free and a cinch to service. For example: only one simple adjustment puts the system in exact calibration even after complete disassembly and reassembly.

ONLY BRISTOL SERIES 500 CONTROLLERS GIVE YOU THIS EASE OF OPERATION

When you wish to reproduce a previous control action or duplicate one taking place at some other point, the Bristol Series 500 Air-Operated Controller permits you to do it merely by setting a dial.

Or, should the instrument require servicing, only one simple adjustment is needed to calibrate the control system and put it back in operation. Almost anyone can service this instrument.

Furthermore, users report that the Bristol Series 500 Controller requires practically no maintenance.

This outstanding instrument—a product of 60 years of experience—is completely described in Bulletin A120. THE BRISTOL COMPANY, 142 Bristol Road, Waterbury 20, Conn.



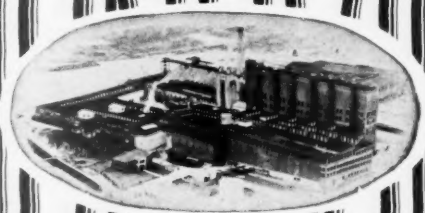
BRISTOL SERIES 500 CONTROLLERS are offered in five types—on-off, proportional, reset, derivative, reset plus derivative—to control temperature, flow, pressure, liquid level, humidity, pH. Conversion from one type to another can be made by the user. Model shown has external-manual station with mechanical interlock for test and service.



BRISTOL

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS

SOUNDVIEW



High Grade
**BLEACHED
SULPHITE PULP**

SOUNDVIEW PULP COMPANY
EVERETT WASHINGTON





colored liner board **GETS ATTENTION**

3 color effects with 2 color printing
positive product identification on the shipping container

What helps your customer helps you!
Let National Technical Service provide
the formulas for distinctive shades.

National Aniline

NATIONAL ANILINE DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 WESTON STREET, NEW YORK 6, N.Y.

Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensburg Charlotte Richmond Atlanta
Columbus, Pa. New Orleans Chattanooga Toronto



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Smooth

You can be sure of smooth
running machines with

TENAX FELTS.

Tenax Felts, designed especially to suit your paper making machines, assure you of the best possible operation. They help you to produce your paper with efficiency and economy.

LOCKPORT FELT CO. · NEWFANE, N. Y.



New Camachines®

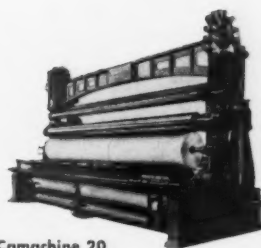
of all types, installed in the first six months of 1950, added more than 105,000 feet per minute (web speed) to industry's potential roll production capacity.

Constantly expanding *Camachine* volume reflects the increasing need for top-quality roll products in the paper, printing, plastics, textile and rubber industries.

Wherever materials are produced or converted in roll form, *Camachines* may be depended upon to provide trouble-free slitting and winding at record-breaking roll production speeds.

There's a reason for *Camachine's* unquestioned leadership... for 57 years *Camachine* engineers have specialized in the design and manufacture of faster, more dependable roll production equipment.

Camachines raise the standards for roll quality, increase the pace of roll production, reduce the cost of the roll product.



Camachine 20

World's fastest paper mill winder, produces top-quality rolls at speeds up to 5000 f.p.m. on newsprint. Features air-operated slitters. Widths from 180" to 300". Rewound diameters to 40" on paper, 60" on board. Write for the descriptive bulletin "Mile-a-Minute."

*105,000 feet per minute!**

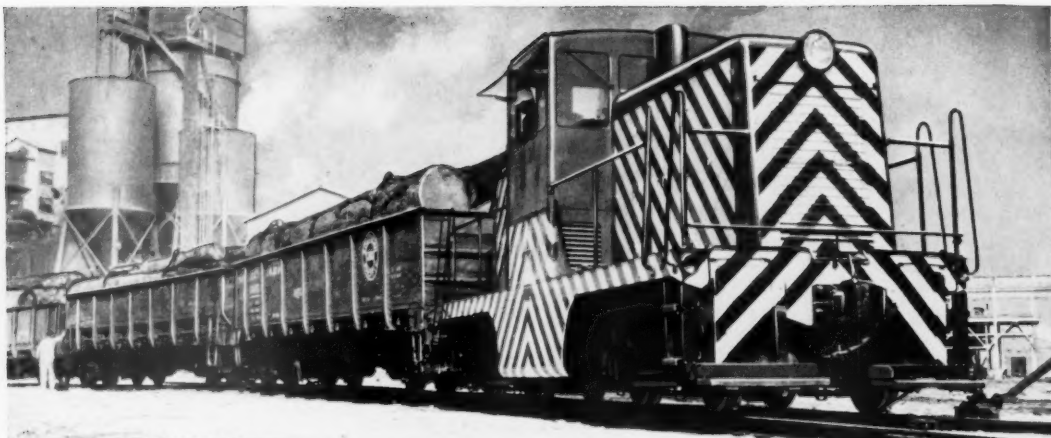
*This figure is a composite of the web speeds of *Camachines* both large and small installed during the first half of 1950.



Cameron Machine Company • 61 Poplar Street • Brooklyn 2, N. Y.

Camachine engineers will be pleased to consult with you on any roll production problem.

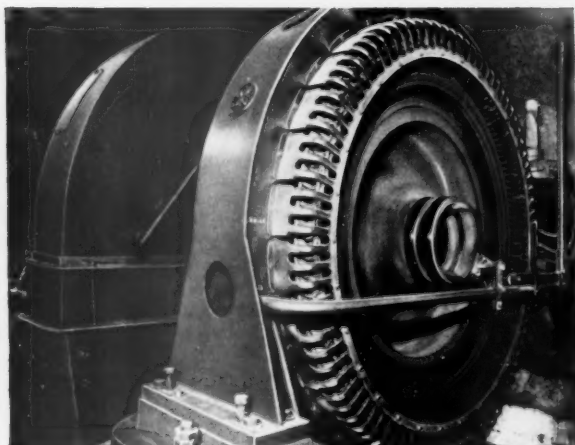
PACIFIC COAST SUPPLY COMPANY • PUBLIC SERVICE BUILDING, PORTLAND 4, ORE. • 260 CALIFORNIA ST., SAN FRANCISCO 19, CAL.
APRIL 1951



LOW-COST LOG-HAULING! You're off to a good start when logs are moved through your mill by G-E diesel-electric switching locomotives. Made in standard sizes from 25 to 95 tons for industrial use, they have 90 to 95 per cent availability for service, need only a one-man crew, and cut

fuel costs materially. Because they emit no cinders or smoke, fire hazards around the wood yard are lessened and greater cleanliness is maintained. Here, a 65-ton G-E diesel-electric switcher feeds a string of loaded cars into a California pulp mill.

Less downtime...



MORE CHIPS IN LESS TIME! Providing high service continuity in wood-chipper service, G-E synchronous motors hold their speed regardless of log size, are sturdily built to withstand shock loads. Here, a G-E 600-hp 327-rpm 2200-volt synchronous motor drives a chipper in a northwestern pulp mill.

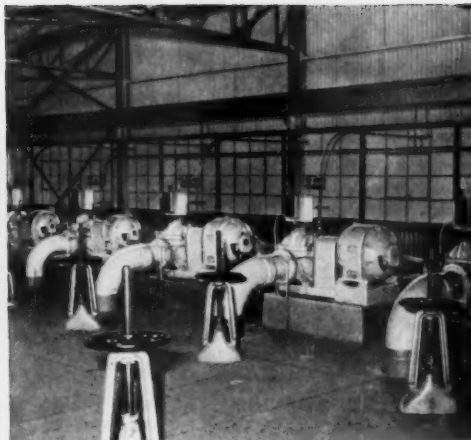


COMPLETE MOTOR PROTECTION! For motors up to 5000 volts driving chippers, barkers, etc., G-E Limitamp controllers provide centralized control and short-circuit protection, preventing extensive equipment damage, reducing costly shutdowns.

GENERAL  ELECTRIC



HIGH-TONNAGE BARKING! Whether you use mechanical or hydraulic barkers, the right G-E motor can be depended on to meet your needs, for years of performance in high-tonnage duty. Here, a G-E 150-hp 2300-volt splashproof motor (under canopy) drives two mechanical barkers in a southern pulp mill.



LOW-MAINTENANCE PUMPING! On pumps in all types of pulp mills, years of experience have proved G-E motors need but little upkeep, as in this installation in a western mill, where G-E 100- and 60-hp open (dripproof) motors drive centrifugal pumps in its river pump house.

from logs to laps!



HIGH-EFFICIENCY GRINDING! In this Southern newsprint mill, four G-E synchronous motors rated 4000 hp, 6900 volts, 200 rpm each, drive grinders on other side of wall. Highly efficient, G-E synchronous motors also maintain constant speed regardless of whether the grinder pockets are partly or completely filled.

G-E equipment for pulp mills—engineered to your needs by skilled industry specialists—helps increase production continuity for greater output of uniform-quality pulp.

Every step of the way in pulp-making—from raw logs to finished pulp—General Electric co-ordinated electric equipment can help you boost production continuity, assure pulp uniformity, and cut costs as well.

Here's why: Years of experience in meeting pulp-mill requirements has enabled General Electric to develop a wide range of dependable apparatus. To make doubly sure your selection from this range is correct, your G-E sales engineer and an industry specialist, who know pulp-mill practice and needs, team up to serve you.

With their pooled knowledge to draw on, you're certain to fill your needs in a practical, economical way. Let your G-E representative with his skilled engineering assistance work with you on your pulp-mill modernization plans.

Apparatus Dept., General Electric Company, Schenectady 5, N. Y.



**Co-ordinated
Equipment**

—to cut costs in pulp preparation!



"Whether there be Prophecies, They Shall Fail"

... those words, spoken by a redoubtable seer nearly 2000 years ago, have probably never been so pertinent as they are today. For today's most carefully computed prediction is liable to prove completely false tomorrow. *We* certainly are not attempting to prophesy anything, but are simply keeping "our noses to the grindstone," to provide the paper industry with quality chemicals ... as we have done for years.

The pictures shown here join with our headline to emphasize this message we would leave with you: *Whatever the uncertainties ahead, you can do no better than call upon the experience, skills and facilities accumulated by Nopco*.*

One of the oldest and most reputable suppliers of paper processing materials, we are confident we can afford outstanding assistance to the pulp and paper industry as it goes to work today in the interests of national defense.

In the manufacture of paper board particularly—destined to play a major role in meeting the packaging needs of America's all-out defense effort—we believe we can be of special help. But whatever your product—paper, paper board, or insulating board—we are ready to make recommendations and supplement laboratory data with technical aid right in your mill.

Send us your specifications now. At the moment, we are prepared to supply you with defoamers, sizes, and all the other chemicals for which we are famous. It will remain our fixed policy to serve you to the best of our ability, *come what may.*



Nopco headquarters — Harrison, N. J.



A section of Nopco's paper laboratories



Applying paper coating mixture to hand sheet.



Testing to determine effectiveness of sizes.



NOPCO CHEMICAL COMPANY

HARRISON, NEW JERSEY

Branches: Boston, Chicago, Cedartown, Ga., Richmond, Calif.

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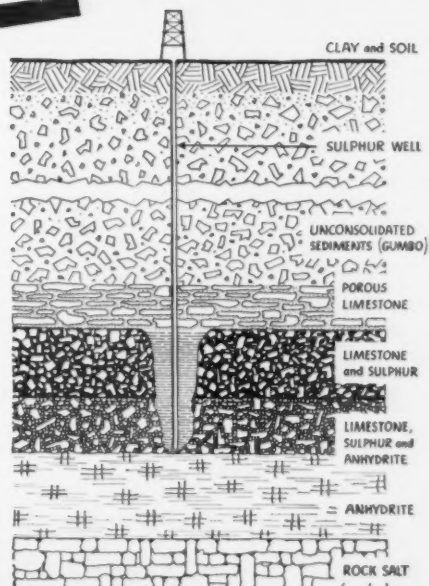
SULPHUR

***Interesting Facts Concerning This Basic Raw Material from the Gulf Coast Region**

*DEPOSITS...

Practically all of the elemental sulphur used in this country comes from mines in Louisiana and Texas.

There, the sulphur deposits occur in the cap rock overlying certain salt domes. The sulphur is mined at depths of 300 to 2,000 feet below the surface. It is melted in place by pumping into the deposit water heated under pressure to a temperature above the melting point of sulphur. The melted sulphur flows away from the limestone and is pumped to the surface where it is allowed to solidify in vats. By such means sulphur nearly 100% pure is produced.



Loading operations at our
Newgulf, Texas mine



TEXAS GULF-SULPHUR CO. INC.
75 East 45th St. New York 17, N. Y.
Mines: Newgulf and Moss Bluff, Texas

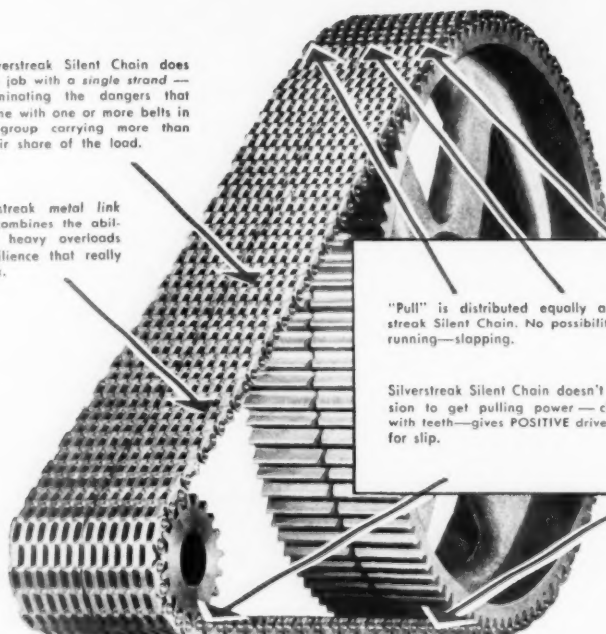
SLIP- PROOF SLAP- PROOF SHOCK- PROOF

Silverstreak Silent Chain does the job with a single strand — eliminating the dangers that come with one or more belts in a group carrying more than their share of the load.

Husky Silverstreak metal link construction combines the ability to carry heavy overloads with the resilience that really absorbs shock.

"Pull" is distributed equally across Silverstreak Silent Chain. No possibility of uneven running—slapping.

Silverstreak Silent Chain doesn't rely on tension to get pulling power — chain meshes with teeth—gives POSITIVE drive—no chance for slip.



12,208

Get Full RPM Transmission With LINK-BELT Silverstreak Silent Chain Drives

Yes, get the amazing, trouble-free efficiency of 98.2%. A standard of operation that continues throughout the long, long life of the drive. More than this — every rating and design is backed by a record of *proven performance*. And every chain is engineered for the job. You conserve space, too —

for Link-Belt Silverstreak Silent Chain Drives operate efficiently on short centers. Ratios as high as 10 to 1 are commonly used.

Little wonder, then, that so many concerns to whom top operation efficiency and rugged dependability are a must, standardize with Link-Belt Silverstreak Silent Chain Drives.

LINK-BELT COMPANY, Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Johannesburg. Offices in principal cities.

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Ask for Fittings Catalog

ESCO pipe fittings are shown with detailed information in catalog 186. Your nearest *ESCO* representative will gladly give you a copy; or use the coupon.

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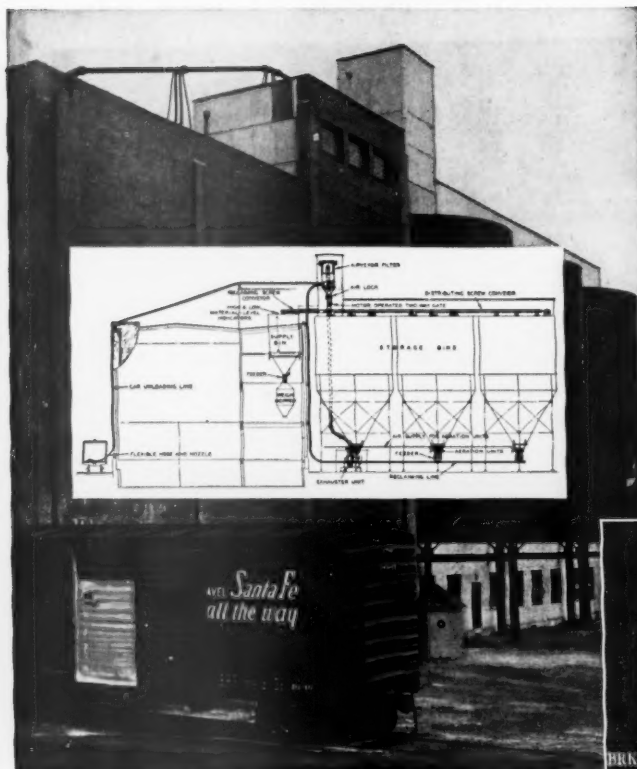
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if it's
pulverized,
convey it
pneumatically



^{TRA}**AIRVEYOR** goes to work for the New York & Pennsylvania Company

Problem: To install a conveying system for coating clay that would match the efficiency of the expanded and modernized plant at Lock Haven.

Solution: Pulverized coating clay, with a moisture content of not over 3 per cent, is pneumatically unloaded from box cars and conveyed to the Airveyor filter for delivery to any one of three storage bins, or direct to a supply bin above a weigh hopper. Unloading rate is 10 tons an hour. The same system reclaims clay from the storage bins and delivers it to the supply bin—by remote control from a centrally located panel board. Provision is made for automatic return of clay to the storage bin, from which it is being conveyed, when the supply bin is full, or to any bin in any sequence when unloading from cars.

If handling of dry, pulverized materials is a major problem to you, look to Fuller for the most economical and practical solution. Fuller specializes in pneumatic methods of materials handling. Today, the Airveyor, and other Fuller Systems, are cutting handling costs, and materially increasing operating efficiency in hundreds of installations. To have a Fuller Engineer survey your present system and make recommendations for modifications places you under no obligation whatever. It's more than likely that the results of his study will point your way to more efficient materials handling at lower operating and maintenance costs.

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DRY MATERIAL CONVEYING SYSTEMS AND COOLERS—
COMPRESSORS AND VACUUM PUMPS—
FEEDERS AND ASSOCIATED EQUIPMENT

A-112

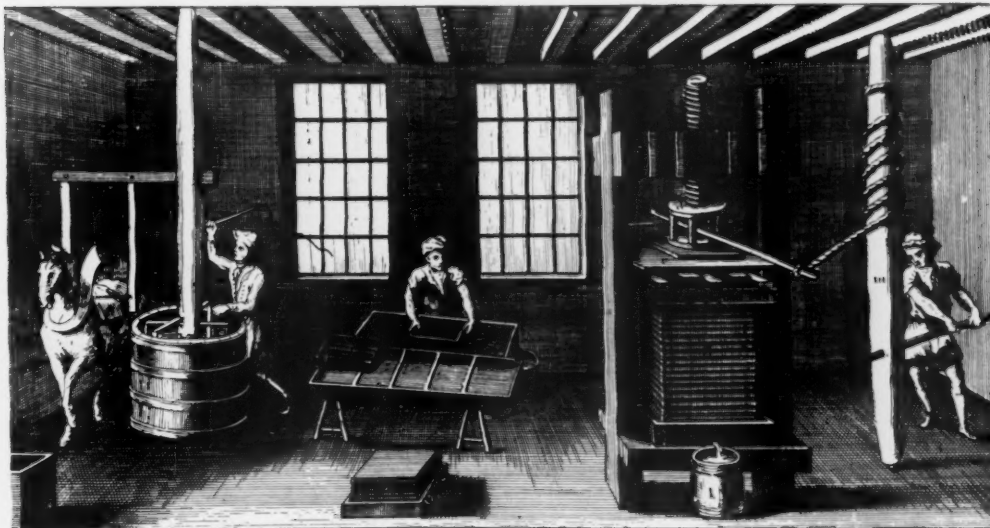


Illustration from the Bettmann Archive

When Paperboard was Made the Hard Way

Nearly two hundred years ago in France, heavy paperboard was used primarily for two purposes—for hat boxes and for the binding of books. The process of making the heavy paperboard from rags was shown in the above illustration in the French Encyclopedia, published by the Academy of Sciences in Paris in 1763.

It was sixty-five years later, in 1828, that G. A. Shryock developed at Chambersburg, Pa., a method of making paperboard from straw. "Many predicted," he wrote years after, "that these boards would become one of the indis-

pensable products of the world." But straw was limited in its usefulness. Thirty-seven years later Benjamin Tilghman, a Philadelphia chemist, invented, in 1865, the sulphite process of manufacturing wood pulp. He was the first to see the far-reaching effect of this method in making plentiful paper possible. Such long, slow strides led eventually to the vast paperboard industry of today. Now paperboard is so extensively used for shipping containers and other purposes that it accounts for practically half the total production of the great pulp and paper industry.

The dramatic story of paper is told in the sound-and-color film, "Paper—Pacemaker of Progress," and in a book under the same title. Both are presented by F. C. Huyck & Sons as a tribute to the Paper Industry. The book will be sent free upon request.

F. C. HUYCK & SONS • Kenwood Mills • RENSSELAER, N. Y.

Pacific Coast Representative: Pacific Coast Supply Co., Public Service Building, Portland, Ore.; 343 Sansome St., San Francisco, Calif.

APRIL 1951



Bingham

PRECISION BUILT FIELD PROVEN PUMPS

Pulp-Hog

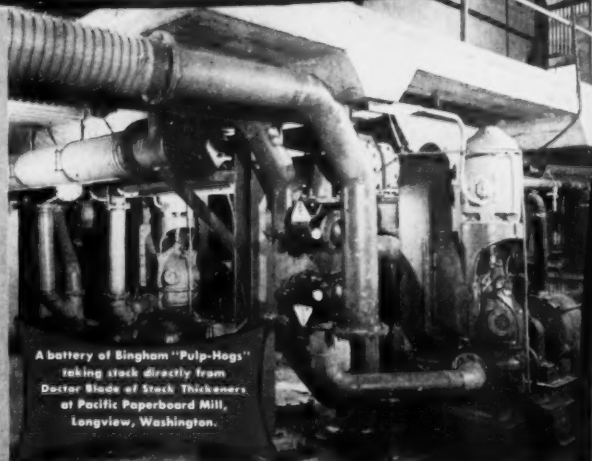
A stock pump that
will not become

Airbound

The Bingham "PULP-HOG" can be mounted on the side wall of Deckers, Washers, and Thickeners and take stock directly from the Doctor Blade without becoming airbound or clogged. The unique design of this pump enables the "PULP-HOG" to receive stock, separate out, and expel the entrained air and deliver at a constant rate into the mill system—no flow interruption.

Bingham "PULP-HOGS" are being used effectively in the Pulp and Paper industry for handling air entrained pulp from Stock Flow Meters, Consistency Regulators, Save Alls, Pulp Refiners, Knotters, Beaters, Washers, Deckers, and Thickeners.

Bingham "Pulp Hogs," like all Bingham products, are precision built in our new and modern plant. All rotating parts are dynamically balanced. All parts requiring close tolerances are ground on heavy duty precision grinders. Each part is subjected to rigid inspection by craftsmen who for years have been trained to follow Bingham's high standards of manufacture.



A battery of Bingham "Pulp-Hogs" taking stock directly from Doctor Blade of Stock Thickeners at Pacific Paperboard Mill, Longview, Washington.

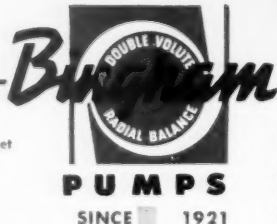


Section of Inspection Department in our new modern plant.

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NOW

for Pulp-Hog Folder 26

Tells why the pulp and paper industry throughout the U. S. and Canada is using Bingham PULP-HOGS. Wire, write, or phone the office nearest you.



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All Langston Slitters and Winders are equipped with efficient and modern shear cut slitters which insure absolutely clean cut, dust free, uniform slitting.

Set-up is quickly and easily made—the front frictionally driven slitters can be instantly disengaged for thread-up, as shown below.

The front slitter angle is fixed and tamper-proof—a simple adjustment is provided to compensate for reduced slitter diameter as a result of grinding.

The best shear cut slitters available are only one of several Langston exclusive features—better check with Langston first!

SAMUEL M. LANGSTON COMPANY

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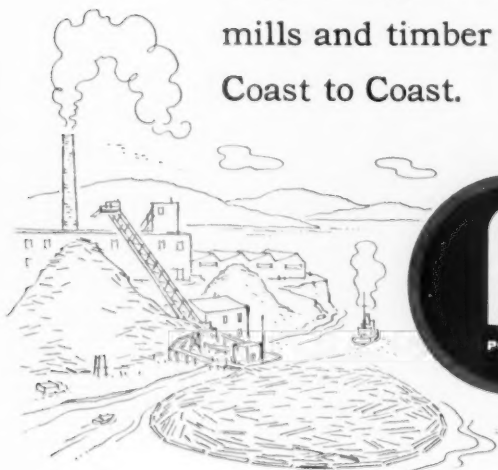
Knowledge

Knowledge is spread by words on paper.

Behind your newspapers, magazines, and books is the pulp and paper industry.

Paper is a vital necessity to a free world.

Abitibi is one of the world's largest suppliers of paper, with mills and timber resources from Coast to Coast.



THE BAGLEY & SEWALL SIMPLEX SHAKE

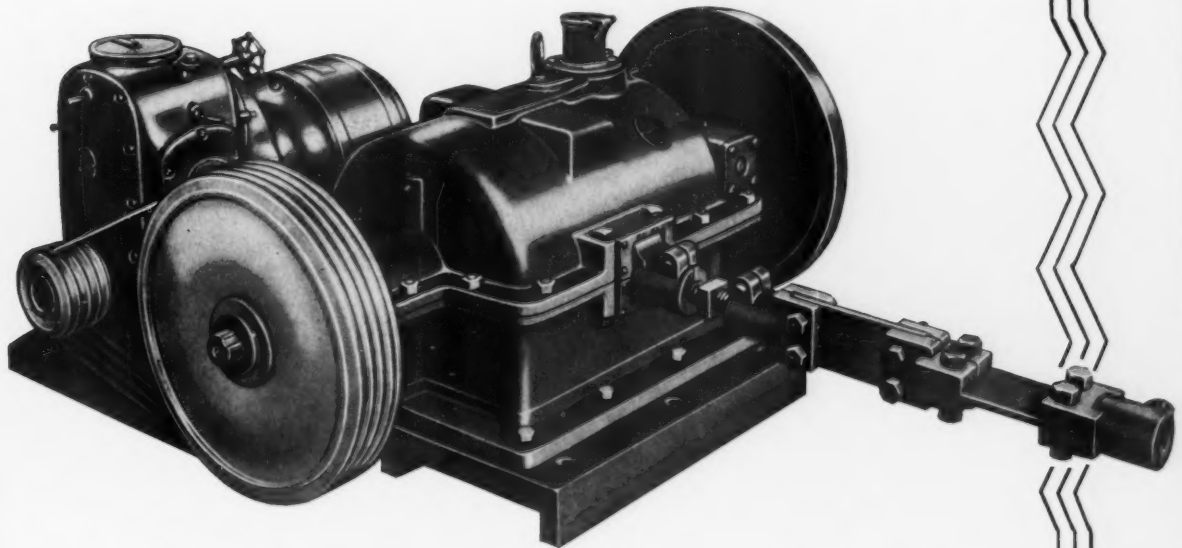
The Bagley and Sewall Simplex Shake gives you a consistent, uniform shake with a minimum of attention. Its operation is based on an eccentric with a strap directly connected with the fourdrinier.

It's compact, self-contained, and easily adjusted. Controls are simple. You can control the amount of stroke and the eccentricity of the shake by merely turning a crank. And — you can adjust the speed and stroke while machine is running.

Lubrication of all moving parts is constant, reducing wear to a minimum.

By the installation of several units on a common shaft, desired degrees of stroke can be obtained at different points along the forming table. Consequently you get a greatly improved formation on the wire.

When in need of new equipment, get in touch with us. Our sales engineers will gladly discuss your problems with you.



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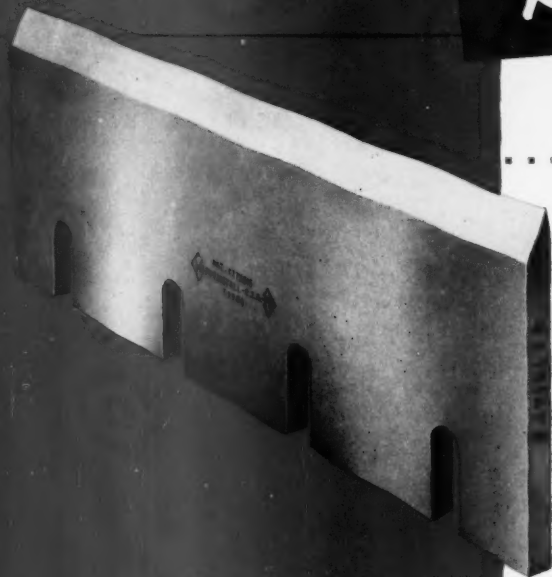


... The Bowie Knife

Named for Colonel James Bowie of Alamo fame, this was the favorite knife of scouts and frontiersmen. With its rugged steel blade, from ten to fifteen inches long, the well-balanced Bowie Knife served equally well as a hunting knife or a combat weapon.



FAMOUS
Blades



... Heppenstall Chipper Knives

have earned a reputation for clean-cutting during long runs in wood rooms from coast to coast. These solid alloy knives, made from Heppenstall's own electric induction steels, are carefully forged and heat treated to give maximum service. You can operate more hours between grinds, improve chip production, reduce production costs by standardizing on Heppenstall E.I.S. Chipper Knives now.

Heppenstall Company, Pittsburgh 1, Pa.
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KEEP THEM OFF THE GROUND ...for Bigger Profits!

You can handle bigger loads . . . get out more logs per day and per season with an Oliver Crawler Tractor and Carco Logging Sully. The terrific resistance caused by logs burying the butt ends in the ground, so common in ground-skidding, is completely eliminated. The full tractor power can be utilized to haul the logs . . . is not wasted in overcoming the "burying" action.

The smooth, accurate turning you get with the exclusive Oliver steering principle assures easiest operation in the

woods. There is no need for time-wasting, operator-tiring "jackknifing"!

You'll find you'll save on fuel costs with this logging outfit. And, an important point, remember the high clearance of Oliver Tractors lets you operate in muddy conditions that would quickly mire down the ordinary tractor.

For all the facts on these aids to profitable logging, see your Oliver Industrial Distributor. The Oliver Corporation, Industrial Division, 19300 Euclid Ave., Cleveland 17, Ohio.



THE OLIVER CORPORATION

A complete line of industrial wheel and crawler tractors





**Our service simplifies
your paper work!**

When you have paper production problems
remember that STEIN-HALL—
with its years of "know how"—
is eager to be of assistance.

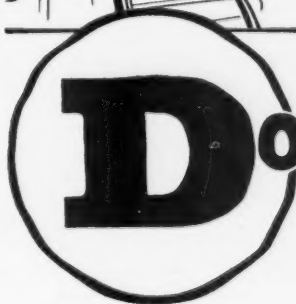
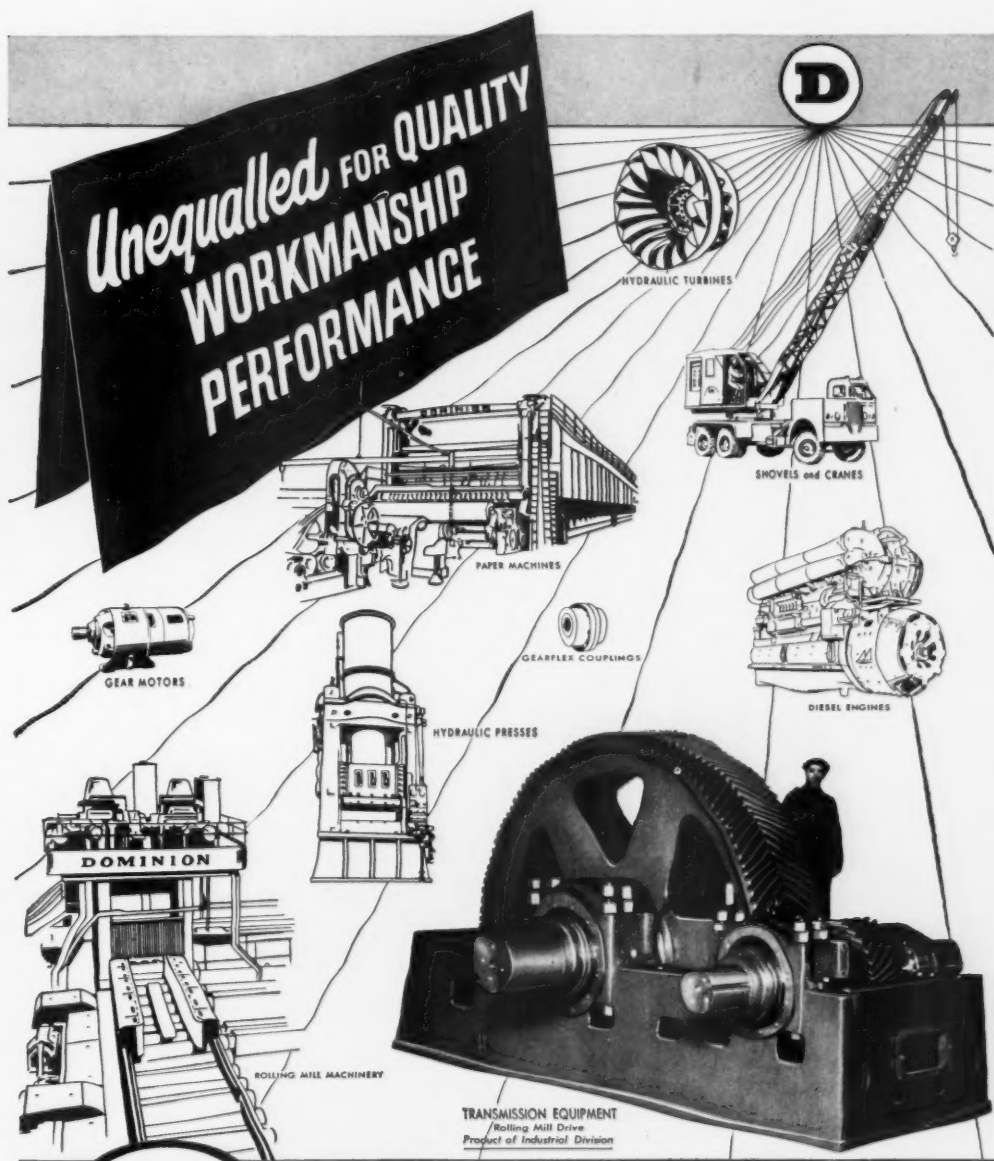
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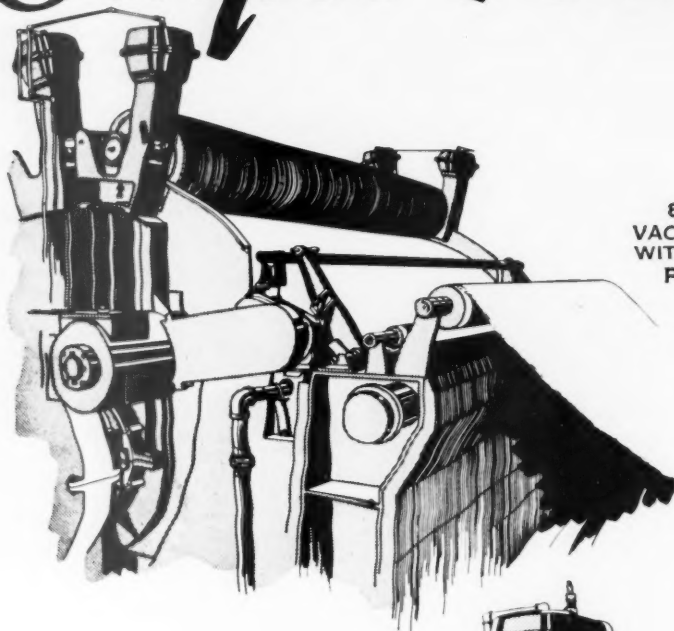
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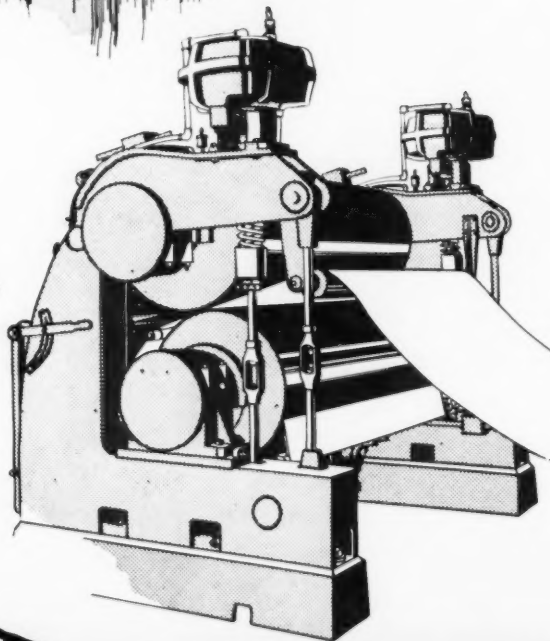
APRIL 1951

35

Impco Feltless



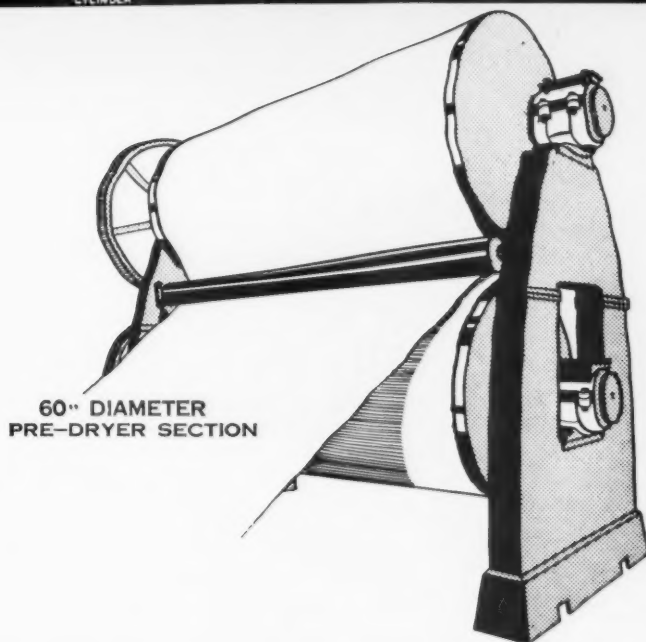
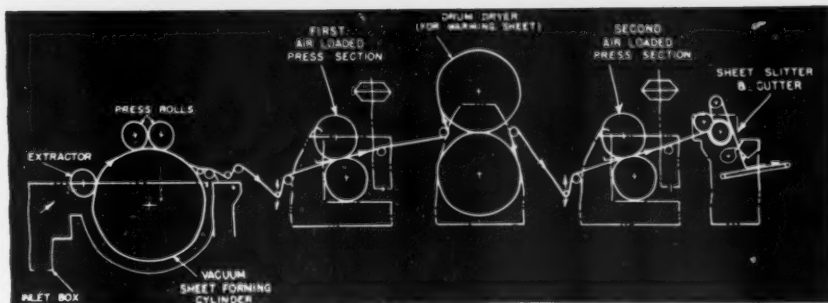
8' DIAMETER
VACUUM WET-END
WITH AIR-LOADED
PRESS ROLLS



MAIN AIR LOADED
PRESS SECTION
WITH
36" DIAMETER
PRESS ROLLS



Wet Machine



The "Impco" Feltless Wet Machine is designed to produce sheet densities in excess of 50% A. D. on all types of chemical, semi-chemical and groundwood pulps.

The complete unit is arranged so that it can be installed prior to a pulp dryer, or the "Impco" Slitter and Cutter can follow, the final press to produce sheets of any desired size.

The "Impco" Feltless features 8' diameter forming cylinder — 36" diameter, grooved air-loaded press rolls—60" diameter pre-dryers—enclosed heavy herringbone gear drives on the press sections all combined to give the customer a rugged wet machine capable of doing its rated job, day by day.

J-12

IMPROVED PAPER MACHINERY CORPORATION
NASHUA, NEW HAMPSHIRE



Ventilation openings on both ends of motor, similarly located.

'A deluge can't stop it'

This new motor is the result of several years of experimental observation and testing of various types of splash-proof motors actually installed outdoors under severe conditions, such as salt fogs, hurricanes, sand storms, etc.

A revolutionary new **ELLIOTT** **outdoor SPLASH-PROOF MOTOR**

- Protected from all directions against wind driven rain.
- Wind driven foreign matter blows straight through inlets and outlets without entering motor.
- Inlets and outlets baffled internally—air taken into motor at low velocity.
- Screens or filters may be added to inlets.
- Sealed split ring-oiled sleeve bearings or anti-friction bearings.
- Stator coils with mica wrapper on slot portion for 2300 volt and higher class "A" insulation. Stator coils vacuum—pressure impregnated.
- Stator and coils after winding given one complete dip and bake, and end turns two additional dips and bakes.
- Foundation may be a simple, economical slab. Does not need to be special or have expensive cored openings.
- No objectional air recirculation.
- All steel frame and brackets coated inside and out with rust inhibiting finish.

Built in sizes 150 to 2000 Hp, 4 to 14 poles.

Contact nearest Elliott Co. District Office for details.



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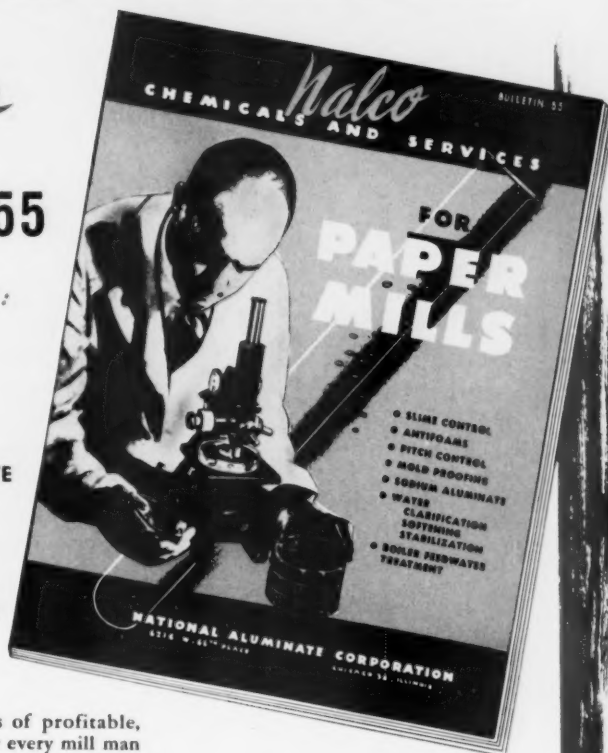
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Nalco

BULLETIN 55

Condensed Data on:

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- PITCH CONTROL
- MOLD PROOFING
- SODIUM ALUMINATE
- WATER
 - CLARIFICATION
 - SOFTENING
 - STABILIZATION
- BOILER FEEDWATER TREATMENT



HERE are twenty pages of profitable, educational reading for every mill man concerned with chemical processing problems. In addition to compact information on the principal Nalco chemicals and services listed above, there are numerous photos and micro-photos of typical microbiological troublemakers in mill systems... a big section giving detailed answers to over 75 of the most commonly asked questions about pulp and paper mill slime control... and factual users' reports on Nalco chemicals and services in action.

Your copy of Nalco Bulletin 55 will be sent promptly upon request. Use the coupon below, or ask your Nalco Representative.

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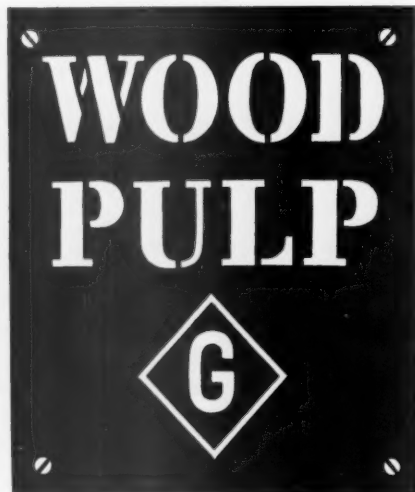
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Established 1886



"Study the past if you would
divine the future."

OLD PROVERB

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that have made Pulp and Paper one of the
nation's great industries, will continue to
develop new products and new markets . . .
to increase ever more the invaluable role
Paper plays in every phase of American life.

There is no limit to what ingenuity and lead-
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PULP & PAPER

"The Cellulose Age"
PRODUCTION AND MANAGEMENT JOURNAL
OF THE
NORTH AMERICAN PULP AND PAPER INDUSTRY

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Use Multiwall Bags for India Relief

The project of the government to send wheat to India, which had been a matter of some controversy, is apparently going through. A worthy project idealistically, in all practicality, as certainly no one is ready to stand in the way where human lives are at stake. India is a nation whose friendship we have strangely lost, and our own diplomacy must shoulder that blame, but famine relief may win some friends we need.

But why not try to help our own people while trying to help the other fellow, too?

Why shouldn't the wheat be made into flour in American mills (in fact much may be lost or wasted if what we hear of primitive facilities is true) before being shipped? And why shouldn't it all be made in multiwall paper bags manufactured in U. S. paper mills by literally thousands of American workers?

How to Lump Timber and Brussels Sprouts

Evidence of further osmosis between the U. S. Forest Service and Department of Agriculture, predicted by PULP & PAPER in mid-1950, is seen in the announcement that the USFS has "taken over" the Soil Conservation Service by order of Secretary Brannan.

Although USFS is, of course, a bureau of Agriculture, it has maintained very clear outlines of organization. In the SCS move, and others recent, it is nonetheless difficult to see which has taken over what. In assuming responsibilities of soil conservation, USFS becomes involved in complicated phases of agriculture and stock raising at a crucial time when it is pleading lack of staff and appropriation for its traditional service.

There are other changes, all in the interests of "defense." The USFS will determine jointly with the Production and Marketing Administration forestry practices to be included in the Agricultural Conservation Program. This includes rates of payment for forestry practices, and standards thereof. This might offer an opportunity, whether or not USFS intends to take it, to buy public regulation of forests. It could involve the forest industries in a subsidy pattern with the rest of agriculture.

Last but not least, Secretary Brannan has formed a National Agricultural Mobilization Committee, in the name of "defense," in which the chief of USFS will have rank with, and not above, heads of other agricultural bureaus, many of which have little or nothing to do with practical mobilization.

The relation of USFS in the activities of NPA has been formalized. The former will act simply as an information-gathering agency, as in the last war. But the question of a Timber Production War Project is still undecided.

If it is decided on the positive side, and meanwhile USFS is loaded with extraneous activities in Agriculture, and the Chief Forester has only one voice and vote in the board of Mr. Brannan's war-time NAMC—under what top authority would timber production come?

It is a question, many believe, to which this industry should begin to find an answer; and the answer will come only from very close observation by private industry to this forestry-farm osmosis in Washington.

Another Wasteful Newsprint Inquiry

Obviously seeking to curry favor with newspaper publishers whose support he would like to have, Congressman McCormack of Mass., who holds the responsible post of being his Democratic party leader in the House, has pre-evaluated another wasteful congressional investigation into newsprint by assuming that it is going to show that newsprint manufacturers are in a "concerted move to gouge" the (apparently in his opinion—poor and indefensible) American newspaper publishers.

The House by unanimous vote (who would dare vote against?) has ordered its interstate commerce committee, headed by Texan Lindley Beckworth, Democrat, to conduct another expensive and wasteful inquiry. This is the empty-umph one in recent years, all seeking but all failing to prove any connivance. At least, this one will have no powers, they being specifically amputated, to invade a friendly sovereign neighboring country (Canada) with its investigatorial methods, which are now well recognized by the intelligent public as simply political "medicine-making."

"WHETHER WE HAVE WAR OR NOT, our industry for some time to come will operate under the same type of economy as in war"—President Harold S. Foley of Powell River Co.

IN THIS ISSUE—

Our feature this month is the first complete and exclusive illustrated article on POTLATCH FORESTS, INC., and that company's new PULP AND PAPER DIVISION. Page 54

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NEWS IN BRIEF • • • AND BULLETINS

CANADIAN NEWSPRINT INTERESTS LOOK OVER SOUTH

According to authoritative PULP & PAPER sources in the South, Canadian newsprint producers, experienced over many years in their field as the world's biggest and highest-speed producers, are making a survey of possible set-ups for mills in Southern U. S., where newspapers are still clamoring for more newsprint. This is a genuine survey without promotional features, we are told. Present producers in the South of newsprint, it is said, look with disfavor right now on expansion due to high costs. . . .

TISSUE PRODUCER ALSO LOOKS SOUTHWARD

It has been confirmed that one of the U.S. large tissue producers is negotiating for the acquisition of the forest lands of Jackson Lumber Co., at Lockhart, Ala., the successful conclusion of which would result in the erection of a pulp mill at Florala, Alabama. Lockhart is a mill site adjacent to Florala. The location is served by a tributary of the Yellow River. It is in Covington county, Ala., adjoining the Conecuh National Forest, just above the Florida state line. Over 100,000 acres of excellent forest stand are involved. . . .

ALASKA DISSOLVING PULP MILL DECISION IS NEAR

Puget Sound Pulp & Timber Co.'s Board Chairman F. G. Stevenot says plans for a dissolving pulp mill at Ketchikan, Alaska, which were begun in 1948, "might come to a head this spring." Ketchikan Pulp & Paper Co., Puget Sound's joint venture with American Viscose Co., may shortly apply for a certificate of necessity from the government, he indicated. It would seek to put up a mill of about 300 tons daily capacity of high alpha pulp, or about 125,000 tons a year. And it would carry plans to expand this to 500 tons daily. . . .

The RFC has committed to put up one-half the estimated mill cost, or \$16,000,000 at 4%. Mr. Stevenot said. Puget Sound Pulp and American Viscose would raise the balance, with the former as operator and the latter to have first call on production. They already have purchased eight billion feet of timber in Southeastern Alaska. . . .

RYEGATE MILL IN VERMONT SOLD

Ryegate Paper Co., East Ryegate, Vermont, has been purchased by interests with the White Mountain Paper Co., Inc., and the Green Mountain Paper Co., Inc., of Bellows Falls, Vt. New owners elected Max D. Bliss, president, Pearl B. Bliss, vice president and Frederick W. Vogel, treasurer. Thomas B. Farwell will continue as general manager. Perkin-Goodwin Co. is exclusive selling agent for the mill's No. 2 Hanging paper. All other grades will be sold direct. . . .

MICHIGAN MILL WILL NOT MAKE NEWSPRINT

The mill at Cheboygan, Mich., formerly operated by Paper Corp. of America and now owned by Lesavoy Industries, Inc., New York, N.Y., will not make newsprint for the present due to lack of raw materials. The mill is now producing bogus corrugating medium made entirely from waste paper. . . .

CHILE PLANS NEW PULP-PAPER MILL

The Corporacion de Fomento in Chile has been authorized to obtain a loan of up to U.S.\$11 million for the purchase of equipment and other requirements for the installation and functioning of a pulp and paper plant. It is understood that this plant will manufacture both cellulose and newsprint. . . .

THIRD PAPER MACHINE IS ANNOUNCED

Announcement of a \$2,000,000 expansion program, including installation of a third paper machine at Westminster Paper Co.'s mill in New Westminster, B.C., was made by E. M. Herb, president and general manager. John Ashby, mill manager, has been in the east making inquiries relative to purchase of a machine which would add about 40 tons to the mill's present production of 75 tons daily. . . .

KAPUSKASING MACHINE NOW READY

A new creped wadding machine in the plant of Kimberly-Clark Corp. of Canada Limited was scheduled to go into production in March, will double the capacity of the Kapuskasing, Ont., plant. Installation of a large creped wadding machine at Memphis is expected to be completed in mid-summer, thereby increasing capacity of that mill 50%. In addition to this, another machine has been ordered for Memphis by K-C, and when it is installed the capacity of the Memphis plant will be more than doubled. . . .

EIRE BUYS MACHINE IN U.S.

Ireland (Eire) will now be self-sufficient in production of paperboard as a result of purchases of new machinery in the United States for National Board & Paper Mills, Ltd., Waterford, Ireland. David Coyle, chairman, Frank Williamson, managing director, and J. Denny, chief engineer, made this claim when they returned home after buying a multiple-cylinder paper board machine, capable of producing 600 tons a week, and the purchase price was \$460,000. The machine was second-hand. . . .

Charles S. Barton Elected R-B President

Rice Barton Corp. directors on March 5 elected George Sumner Barton chairman of the board, and his son, Charles Sumner Barton to succeed him as president. The latter joined the 114-year-old paper-making machinery firm in 1932, apprenticing in all departments, working up to v.p. in 1942. . . .

Four Bartons in direct descent, starting with the great-grandfather of the present head, have been president:

George Sumner Barton	1867-92
Charles Sumner Barton	1892-14
George Sumner Barton	1914-51
Charles Sumner Barton	1951-

Lester M. Start and Everett W. Clem were elected vice presidents, Stuart B. Dickerman, treasurer, and Stephen B. Stafford, secretary. . . .

Harry Straus Dies

Harry H. Straus, president and chairman of Ecusta Paper Corp., Pisgah Forest, N.C., died Feb. 27 of a heart attack at his Asheville, N.C., home. He brought the first flax-cigarette papermaking process to this country from France in 1939, and was builder of the Ecusta mill, recently sold to Olin Industries. . . .

Paper Leaders Hold High Positions in NAM

Cola Parker, president of Kimberly-Clark Corp., and Frank Youngman, vice president of Crown Zellerbach Corp., had to miss Paper Week because they are vice presidents of the National Association of Manufacturers and therefore were required to attend the NAM winter meeting, first ever held in the west at Coronado, Calif. Mr. Parker is a vice president and Mr. Youngman a regional v.p. of NAM. . . .

Four Experience Papers In April 13 Shibley Contest

As usual each year, actual "experience" papers developed by young men in the Pacific Coast mills are entered in the 1951 Shibley Award contest, to be held beginning at 2 p.m., Friday, April 13, at Longview, Wash. (In Lower Columbia Junior College Auditorium, one block north Hotel Monticello.) Moderator is Dr. Walter Holzer, assistant research director, Crown Zellerbach Corp., and four papers are entered this year: . . .

"Seam Adhesive for Multiwall Bags," by K. M. Shold, Crown Zellerbach Corp., Port Townsend, Wash.; "Special Problems in Operation of an MgO Base Acid Plant," by John L. McClintock, Jr., Pulp Division, Weyerhaeuser Timber Co., Longview; "Photographic Standards for Dirt Control," by W. F. Cyrus, Crown Zellerbach, West Linn, Ore., and "Source of Wood Dirt in Unbleached Pulp," by Carter A. Watson, Puget Sound Pulp & Timber Co., Bellingham. . . .

INDUSTRY'S VIEWS ON CONTROLS

Pulp Producers and Consumers Okay Statement

Among topics uppermost at Paper Week was that of controls, and the consensus with regard to them ably presented by L. Keville Larson, Pulp Division, Weyerhaeuser Timber Co., who last year performed similar service in crystallizing industry opinion on imports in relation to then current conditions. That his conclusions are objective and representative is reflected in approval at both the U. S. Pulp Producers meeting, where first presented, and also at the annual luncheon of American Pulp Consumers whose attendance includes more than non-integrated mill representatives, being a fair cross-section of the industry.

Mr. Larson believed it dangerous to ignore lessons of the last war in present preparation; and equally dangerous to assume that World War II production and distribution controls would serve, without modification or regard to surrounding conditions and circumstances.

He held that a combination of extraordinary circumstances dictated the course of the war-time pulp allocation program: 1. Abnormal curtailment of pulp supply, due to the stoppage of European imports. 2. Abnormal pulp demands directly attributable to the War Program. 3. The need for maintaining non-integrated paper and board production in order to insure a balanced paper and board output for the satisfaction of defense requirements.

Said Mr. Larson: "Prewar, imports of European pulp constituted 57% of our market pulp supply, and loss of these imports called for drastic remedies. Also three basic war-time programs of government created heavy requirements of pulp over and above civilian demand: 1. The War Production Program. 2. The Lend-Lease Program. 3. The Good Neighbor Program. Thus, it was necessary for a few producers to divert very large tonnages from regular customers, many of whom had already been adversely affected by import curtailment."

"It was the judgment of government," Mr. Larson said, "that full burden of these basic programs should not be borne alone by those whose basic supply had to be diverted to war purposes; the principle of sharing the burden found expression in a program of pulp allocations."

Recalling the period prior to the last war, the Weyerhaeuser executive pointed out that 83% of the world's pulp exports originated in Europe. A direct cause of U.S. shortages last war was curtailment of European exports; during the war no pulp came from that source.

"Today there has been no curtailment of international pulp movement. On the contrary," he commented, "international pulp trade during 1950 was at its postwar peak. Further, the U.S. has lost none of its supply sources up to the present time.



MR. LARSON, whose views are endorsed by Consumers as well as Producers.

Short of war, there is no reason to expect that any source will be cut off. Market pulp supply in 1950 reached a postwar peak in all major world markets. Domestic new supply (i.e., production plus imports minus exports) in 1950 exceeded 1949 new supply by 37%.

"Whereas the U.S. depended on Europe for 57% of her market pulp supply prewar, European imports in the last three years amounted to only 19% of our total market pulp supply," Mr. Larson continued. "A stoppage of European imports, even in event of a new world war, would therefore be one-third the magnitude of World War II as a supply problem, due to growing North American self-sufficiency."

Himself a "veteran" WPB official for the industry, Mr. Larson reminded his listeners that "WPB required large quantities of wood pulp for nitration. Published estimates indicate at one point this single requirement absorbed over 25% of the entire available dissolving pulp supply, a supply materially augmented at the time by a diversion of capacity from the production of paper grades pulp to production of dissolving grades. Allocation spread the burden of nitration requirements and helped maintain essential production of consumers to whom this pulp would normally have moved."

Nitration, barring full scale war, is bound to be materially less, the wood pulp sales chief believed. In explanation, he said: "Requirements in World War II continued heavy; smokeless powder was continuously expended. The current phase, on the other hand, is primarily one of insuring adequate capacity and inventories. Nitration pulp requirements will be substantially less, for the present, and these will be applied against sharply expanded dissolving pulp supply."

"While problems created by nitration may be of much lesser magnitude, it is conceivable that the demands for nitra-

tion pulp could, nevertheless, seriously discommode current distribution. The currently available supply is being fully absorbed in production of rayon and other important products. Any diversion of dissolving pulp supply from present uses to nitration is bound to create new problems which can be solved either by expansion of dissolving pulp capacity and/or by limited controls to insure effective distribution and use of available supply."

During World War II, with Scandinavian and Central European pulp unavailable, the obligation to supply pulp and paper needs of Allies, under Lend-Lease and under the Good Neighbor Program, fell squarely on North America.

He reminded Paper Week leaders: "It was our responsibility to make certain, through allocations, that basic requirements of Allies were met. Since the war, Europe has not only been self-sufficient in pulp supply, but has substantial exportable surpluses. Europe's present supply sources, short of war, are secure. Any additional requirements for specific grades or types to insure defense or her economic progress must certainly be modest in comparison with old lend-lease requirements. It should be possible to satisfy Europe's essential pulp demands without complete disruption of world trade in pulp."

Further pinning down the facts of difference between 1941-45 and the present, Mr. Larson submitted that "Imports currently constitute 55% of our total U.S. market pulp supply; domestic sales 45%. The success of an allocation program must hinge on the feasibility of government controlling that portion of our supply currently being imported (55%), without adversely affecting the volume of imports."

As to specific conditions last war, he went on, "During World War II, the government did direct the distribution of imported pulp without causing a diversion of foreign supply. The success of the war-time pulp allocation program was due to surrounding conditions and circumstances during the war period, combined so as to make the program feasible. These conditions were as follows: 1. Imports of market pulp during the war period were available from but a single source—namely, Canada. 2. By the time the general allocation of wood pulp was undertaken during the last war, it was clearly apparent that a coordinated program for the distribution of North American wood pulp was essential to the success of our joint war effort. 3. Because of the war, Canada had only one substantial available outlet for her market pulp—namely, the U.S. 4. Domestic price controls, during World War II, did not operate as a deterrent to the sale of Canadian wood pulp in this market—again because Canada at that

time had only one substantial available outlet for her pulp."

Mr. Larson averred and clearly illustrated as follows: "None of these conditions prevail now. 1. Imports of market pulp are currently available from all normal supply areas. The government's objective should be to maximize the supply of market pulp from all sources. Pulp allocations would defeat that end if they were to result in a diversion of the foreign pulp supply. 2. Participation on the part of our major foreign sources of supply in a coordinated plan, worked out at the proper governmental levels, is essential to the success of a domestic wood pulp allocation program. No arrangements for such a plan have as yet appeared. 3. The foreign pulp industries currently have access to many substantial available outlets besides the U.S. A domestic program of pulp allocation undertaken without their cooperation would probably result in a diversion of foreign pulp to other markets. 4. Since sales of wood pulp currently command lower prices in the U.S. market than in other available world markets, the economic incentive for a diversion of foreign pulp supply already exists—an attempt by our government to allocate imports without the assured cooperation of our major foreign supply sources would aggravate the incentive for diversion."

Arranging the probabilities, the speaker stated that an attempt to allocate wood pulp under current conditions, would result in a serious diversion of market pulp to other markets. "But there is another consideration," he said, "when all pulp, domestic and foreign, was sold in this market at established price ceilings, there was no question of price to contend with, as distribution schedules were shuffled and reshuffled by the allocating authorities."

"Today the spread in the contract range of bleached sulfite prices, domestic and foreign, under the established freeze, is already substantial. Redirection of the normal flow of foreign and domestic pulp in this market could only result in a series of unjustified economic losses and unmerited economic gains, with the possibility of lawsuits involving producers, consumers and even government."

The APPA committeeman saw the basic mobilization problem of our industry as one of insuring a productive capacity adequate in quantity and quality to meet civilian and defense requirements. Distribution and price controls should be fashioned with this basic objective in view; if this phase of mobilization is successful, the problem of a balanced production of end products to meet diversified needs of defense economy will be materially simplified," he said.

The dangers, in Mr. Larson's words, are these: "Pulp consumers in recent months have been at capacity. Pulp supply, over-all, has been in virtual balance with requirements for consumption. Pulp shortages, to the extent that they exist, are for the most part either shortages of supply for inventory or isolated instances



ANOTHER TRIO—Photographed at American Pulp Consumers Luncheon by PULP & PAPER (l to r): LEROY NEUBRECH, Government's Chief of Pulp and Paper in National Production Authority; STANFORD BLANKINSHIP, Vice Pres. of Perkins-Goodwin and President of American Importers Group; JAMES RITCHIE, Executive Secretary of U. S. Pulp Producers Association.

of individual company shortages. Under normal circumstances, purchases assume the consequences of their own procurement. Where defense requirements and the national interest are involved, however, the NPA should assist companies whose supply is inadequate to meet specific essential demands imposed by the defense. Failure to take timely action could result in premature pressures for pulp allocations at a time when conditions would not permit effective operation. The power to expedite war production includes the power to direct deliveries of raw materials to the extent necessary to facilitate defense production. To initiate pulp allocations in order to solve the personal raw material problems of a few individual consumers would go far beyond the bounds of necessity, and create new problems far greater in magnitude than those we now have or are likely to have in an unrestricted market."

He concluded that "any current effort to allocate wood pulp in (view of uncertainties) the soundest official distribution policy would be to make haste slowly, utilizing the type of conservation-limitation orders used so effectively during World War II, and improvising limited controls where necessary in order to keep specific situations from festering."

In summation, Mr. Larson said, "The success of such a policy, however, would depend on the ability of the industry to cooperate intelligently within itself and with the industry divisions of the governmental agencies to solve the various marginal dislocations and meet the extra demands generated by the defense program in this initial phase. If we fail in this we can easily invite the imposition of more far-reaching controls than the real conditions require, under circumstances which would seriously impair their chances of success."

Integration of Logging

Great Lakes Paper Co., Fort William, Ont., has acquired a substantial stock interest in Northern Wood Preservers, Ltd., Port Arthur, Ont., according to a joint announcement by Earl Rowe and R. J. Prettie, presidents of the respective companies.

This action is in line with the company's policy for economical utilization of all forest species. In accordance with an agreement with the Ontario government, all future cutting on areas held by the two companies will be completely integrated.

Stream Improvement Report by Gair's Dyke

At Paper Week's annual meet of the board of governors of the National Stream Improvement Council, George E. Dyke, president of Robert Gair Co., Inc., was once again re-elected chairman, increasing the evidence of the progress being made under his regime. With him now on the governors' board are C. B. Morgan and W. Irving Osborne, Jr., as vice chairmen; J. D. Zink as treasurer; and Russell L. Winget, long-time executive secretary and assistant treasurer.

Mr. Dyke's review of the seven years of the Council revealed considerable aggregate progress. In fact, said he, "probably no other industry among ranking manufacturing has accomplished as great an overall reduction in the volume and pollitional character of its wastes." He quoted statistics showing that almost 40% of mills now have waste disposal facilities; and on kraft he stated that "population equivalent of waste is currently about 250 persons per ton of pulp Less than ten years ago it was 500."

White water losses are correspondingly reduced, according to the data presented, and he stressed the current and ever accelerating improvements in handling sulfite waste liquor through base changes, by-product development, lagooning, new equipment and processes, and other treatments. Pennsylvania and Massachusetts have made startling waste reductions: the former has reduced settleable solids by 70% since 1948, the latter by 90%.

The effect of mobilization on stream improvement and the Council's work? Mr. Dyke frankly admitted changes and modifications might be in the offing, and believed materials and manpower shortages explained the inevitability.

Official Report Favors Pulp Mill in West

Timber resources of the Kyuquot district on the west coast of Vancouver Island lend themselves to establishment of a pulp mill in that area, according to a report of the British Columbia Forest Service.

The heavily timbered Kyuquot region is now estimated to carry more than 19 billion bd. ft. of merchantable timber. More than 8.5 billion feet of the total is western hemlock and 4 billion feet balsam, the balance being mostly cedar and fir.

PIVOTS OF PAPER WEEK

TWO TURNING POINTS NOTED



AT PAPER WEEK—photos by Jean Raeburn Studios for PULP & PAPER (left to right) ROBERT EVANS, new Pres. of American Pulp Consumers Assn., now Asst. to President and Assistant to Executive Committee of Olin Industries. FRANK MITCHELL, General Mgr., Canadian Pulp & Paper Assn., which he represented in New York meeting. GEORGE OLMSTED, Jr., President of S. D. Warren Co., elected to his second term as President of American Paper & Pulp Assn.

Naturally enough, the four subjects discussed at the open industry meeting under the Starlight Roof of the Waldorf-Astoria during Paper Week by three industry leaders and a San Francisco attorney were among the "hottest" topics under view by the industry men representing their companies in the management and technical field at the big national annual in New York.

The topics were: The Pulp Situation; Industry Relations with Public and Personnel and Stockholders; Paper Imports; and the Anti-Trust Laws.

Strongly augmenting the problems involved in the pulp situation were discussions under the generalship of the American Pulpwood group, and talks at the annual Pulp Consumers luncheon. But although pulp and pulpwood were first and second in the minds of leaders and on the programs, the third Big Question was conspicuous by its absence as a subject up for formal discussion. This was the problem of priorities and materials allocations for industry, as well as certificates of necessity on machinery.

However, as detailed later via exclusive interviews with industry and machinery leaders during Paper Week, it was felt considerable progress is being made behind the scenes. And at least one mill executive, the newly-elected president of the Pulp Consumers, Robert Evans, held the subject up to view as a vital key to the current situation on production, and his remarks are found in this issue.

By the nature of his assigned subject, Lawson Turcotte, president of Puget Sound Pulp & Timber Co., Bellingham, Wash., was keynote speaker at the Feb. 22 open industry meeting which was monitored by Mead chairman Sydney Ferguson, past president of both APPA, of whose sessions this was a feature, and of American Forest Products Industries. Also because his subject was pulp production, cost and price, and supply, Mr. Turcotte's speech became in a sense the keynote of Paper Week in all its aspects.

Featured complete in this issue, the Far West pulp producer's speech put on

view for re-examination the trials and errors for which consuming mills, integrated operations, and producers alike were mutually responsible. On the base of this experience, the one-time lumber "tallier" who has risen from the post of accountant in his company to president, indicated in common sense fashion the ideal future policy—and took care to state frankly the factors that spell higher costs for the inevitable new tonnage.

Traditionally in this period of the industry such industry leaders as George Olmsted, Jr., president of S. D. Warren, and E. W. Tinker, respectively head and executive-secretary of APPA; L. Keville Larson of the Pulp Division of Weyerhaeuser, Morris Dobrow of Writing Paper's group and James Ritchie of the U.S. Pulp Producers Association, or William Beckett, midwest mill executive who retired in February as head of the Consumers group—these and others have crystallized current phases of pulp which ever more vitally affects the whole industry. Mr. Turcotte's speech undertook to review the entire set of past and present facts, and in the light of those to look at the immediate future. Long observers of Paper Week did not recall it had been done heretofore, particularly in an area that shut out all statistics except general operating figures, keeping the light on the specific responsibilities of both consumers and producers of pulp, as well as the realities of the foreign situation.

Two Turning Points

The Bellingham man's review was one of two comparable turning points evidenced at Paper Week, it was believed by many. The other came with the elec-

tion of Robert Evans as president of the Pulp Consumers. Formed in its earliest days almost wholly to encourage pulp imports both for supply and as a price control, the Pulp Consumers group has increased greatly in breadth of interest and activities, particularly under the regime of Karl Clauson, secretary, and recent presidencies like that of Hugo Hanson of W. C. Hamilton & Sons, and Bill Beckett of Beckett Paper Co. That its changes often have been of necessity in a changing world most members freely admit, and Mr. Beckett at Paper Week publicly observed with humorous truth that it was still organized to (among other things) "get pulp at the cheapest damned price possible."

Nonetheless, the unanimous election of Mr. Evans at least momentarily belies that emphasis. He is a "big organization" man by background in Bankers Trust before the last War; a graduate of WPB pulp allocation as firm with consumers as with producers; a former high official of the sizable Riegel operations which include textile operations and participates in initial phases of Riegel's entry into pulp making; and is now assistant to the president of Olin Industries, Inc., and assistant to the Olin executive committee of management, and as such is in a picture which includes Cellophane (under duPont processes and agreement) as well as specialty flax papers and pulp supply.

New Public Relations Approach

Of interest, due to current phenomena, was the talk of another westerner, A. R. Heron, vice president of Crown Zellerbach, expert in industrial and public relations, who talked of his specialty in vividly practical terms, also as key member of an APPA committee seeking to express the industry in clearer terms to its employees; and chairman of its new community relations committee for which funds were appropriated during Paper Week.

By citing incidents of purchasing in the life of George Washington, Mr. Heron offered timely contrast to modern industry's situation. He painted an extensive mural which told a story from the first President's purchase of "400 sheets of foolscap" to the present complicated pulp and paper structure. Clearly he demonstrated that modern paper making touches on so many fields and businesses and so many kinds of people that, as Mr. Heron's title indicated, "somebody is always listening." And, said he, it is the failure to properly link up the logger in the hemlock woods with the pulp mill beater man, with the machine tender, with the jobber clerk, with the department stationery store, with the stockholder, with the customer, with—painstakingly and astoundingly Mr. Heron showed how the key on the other

side of one door unlocked the perfect public relations of the next. It was a new approach to a subject of widening interest.

D. K. Brown, head of Neenah Paper Co. and past president of APPA, admitted hoping he would need not return to speaker's role to the halls of APPA. But although blaming his appearance on the persuasiveness of Ted Tinker, it is likely that anxiety on his subject—as well as widely expertness in it—brought Mr. Brown to the rostrum.

The fourth speaker, noted San Francisco attorney Philip S. Erlich, had an alert and ready-made audience for his address on "Anti-Trust Laws," due to the continued and unprecedented attack and investigatory attitude of government from the direction of the capital. But Mr. Brown's subject—that of paper imports—was at the moment disturbing fewer segments of the industry, and even these few had been somewhat lulled by a period of shortages and heavy demand—a situation which makes importers and their foreign sources friends in need. This placidity had been enhanced by constant administration publicity and also by ECA assurances.

Brown's 4-Point Program

But Mr. Brown warned that the danger, although dimmer, was nonetheless present. Soon he had his listeners sitting as straight as for Messrs. Turcotte, Heron and Erlich. Highlights of the Wisconsin mill president's warning follow:

"Let us not be misled into believing that further raids on the American market will be lacking, or that plans for more tariff reductions have been abandoned.

"Further, a recent special report, entitled 'A Blueprint for Future U. S. Foreign Economic Policy,' proposes drastic changes in the nation's tariff program. Fortunately, the United Nations discovered they could not abuse this country without consent of Congress.

"Extension of the Trade Agreements Act means a battle by industry which fears a further approach to free trade and a consequent deterrent to our industrial prosperity.

"The U.S.-expressed objectives (to avoid competitive tariff raising, to minimize quantitative restrictions and discriminations) are now difficult to attain. New schedules of duties have been put into effect in late 1949 and early 1950, and the opinion expressed at the Torquay Conference was that significant improvement in the competitive position of foreign goods in the U.S. market has resulted from these previously negotiated duties. In fact, the improvement in some cases had been so marked as actually to cause alarm and resulted in some requests for withdrawal of duty concessions. While the escape clause of the agreement was only used once by the United States insofar as Europe is concerned; namely, to raise the duty on felt hats, yet Europeans accused us of not being willing to play the game when it was tough going. Let us not forget that the majority of the countries involved have become past masters in dividing what the other fellow has



PAPER WEEK PARTICIPANTS (l to r):

SYDNEY FERGUSON, Chairman of Mead Corp., who presided at Open Industry Meeting on Starlight Roof of Waldorf-Astoria. He is First Vice President of American Paper & Pulp Association.

ALEXANDER R. HERON, Vice Pres., Crown Zellerbach Corp., nationally known employee and industrial relations expert, explained need of new conception of public relations.

D. K. BROWN, ex-Pres. of APPA and President of Neenah Paper Co., told of effects of paper imports in U. S.

E. W. TINKER, Executive Secretary of APPA.

JOSEPH ATCHISON, head of Pulp & Paper Division of ECA.

got, and we can take credit for educating them in this respect. Let us also remember that the so-called dollar shortage that has prevailed in Europe for several years has been greatly relieved.

"When our State Department goes so far as to acknowledge the possibility of their program for increased international trade resulting in unemployment and perhaps crippling certain industries, with the further possibility of putting employees on relief rolls until they can be moved to other industries and communities, then it is time for us to get up on our hind legs and let our representatives, state and national, know the score. Much propaganda pressure prevails to have the United States Senate approve the ITO Charter and yet it is doubtful if a majority of Congress understand it and the implications thereof. While it is true the Senate would not pass the Havana Charter, the proponents are trying to sell it, or parts of it, under different names.

"A proposal was even made that we buy our own domestic pulpwood, ship it to a foreign country where it could be manufactured into pulp and paper and then return the paper to this country duty-free, to compete with our own products.

"What can we do about it?

"1. Let it be known that we are not objecting to an international trade organization as such. But we are unalterably opposed to the Havana Charter itself.

"2. Enlist the support of labor.

"3. Give the facts to local communities.

"4. Be ready to support any proposals such as reinstating the peril point provision."

The Technical Sessions

Production for mobilization was the over-all "hot" theme at the technical sessions at the Commodore. How to make more and better pulp and paper and push

against ever-rising costs was reflected in the TAPPI program for the commodore show. Machinery and equipment, most of it new or recently proved, as well as processes developed wholly or in part by independent suppliers were featured in the majority of papers.

Evidence of swiftly accelerating interest of management in the down-to-mill and woods operations was apparent throughout this year's Paper Week. So also was the ever-broadening interest of management in human affairs as affecting every mill operation. This last was apparent in the names and topics of the leading outside speakers. Henry J. Taylor, radio commentator and ace in General Motors air advertising, hit current events hard as the featured speaker of the record attendance 74th annual APPA banquet; Kenneth deCourcy, publisher of the international top level news service, Intelligence Digest, tore the red wraps off Communist infiltration at the ever-more popular luncheon of the Salesmen's Association of the Paper Industry to which now most manufacturing leaders also come.

And while the TAPPI luncheon at the Commodore on Paper Week's break-up day featured an "outside" subject, retiring president Al Bachmann and associates did not have to go beyond the industry for the expert. This was J. D. Zellerbach, president of the vast Crown-Zellerbach organization, who has become a leading and influential internationalist by decision even prior to his remarkable record for ECA in rebuilding Italy's pulp and paper industry. From first-hand knowledge, Mr. Zellerbach described how ECA battles the forces of Communism, and charged all industries with their responsibilities in the struggle.

Interest of management in the direction of the technical field—a phenomenon of trend visible during the past ten years at least, but now very sharply rising—was keynoted.

NEW 1951 PAPER HIGH FORECAST

In his Paper Week report, Morris C. Dobrow, executive secretary of the American Writing Paper Association, predicted more controls and regulations of all kinds in 1951. He said production of physical goods may be 15% to 20% higher than in 1950 or at least 10% to 15% if limited by lack of materials and manpower, "and this will call for a considerable increase in consumption of paper and paperboard."

"It is probable another new high paper production record will be established in 1951," he said, unless all-out war severely reduces manpower and materials.

In part, his summary noted:

"The American paper industry has made a succession of new high records in 35 out of the 50 years since the beginning of the century. A year to year decline in production is the exception rather

than the rule. It has occurred only in years of cyclical depression and in periods of postwar readjustments.

"The 1950 production of paper and paperboard in the U.S. is estimated to have been 24,300,000 tons, as against a production of 20,327,000 tons in 1949 and the previous record of 21,928,000 tons in 1948.

"The 1949 to 1950 gain of 20% appears fantastic for an industry with a usual 4% per annum rate of growth."

As to whether 1950 output was all consumed or stockpiled, he deducted:

"On the basis of an overall increase, 14% in physical goods production in the U.S. in 1950 over 1949, the consumption of domestically-produced paper and paperboard probably was something like 23,900,000 tons. Paper, however, is more

closely related to the non-durable goods industries which had an estimated increase of 11% in 1950 over 1949. This would indicate a consumption of something like 23,300,000 tons. On the basis of these assumptions, consumption of domestically-produced paper and paperboard in 1950 was somewhere between 23,300,000 and 23,900,000 tons, against an actual production of 24,300,000 tons.

"If these assumptions are valid, it is evident that the margin between production and actual consumption did not become significant until the fourth quarter, and it may take several months more for it to show up as ample inventories somewhere along the line between the mill and the point of actual usage of the paper."

Here follows figures he offered of production and capacity by grades:

U. S. PAPER CAPACITY AND PRODUCTION BY GRADES

Grade	1939			1949			Preliminary 1950		
	Capacity	Production	%	Capacity	Production	%	Capacity	Production	%
Writing	747,100	594,594	80	1,013,000	806,133	80	1,012,000	969,000	96
Other Fine	165,570	128,508	78	273,000	208,821	76	273,000	254,800	93
Book Uncoated	1,921,260	1,534,591	80	1,618,000	1,395,755	86	1,636,000	1,577,000	96
Machine Coated*				968,000	911,878	94	1,046,000	1,015,000	97
Groundwood Uncoated	631,470	540,342	86	775,000	674,542	87	710,000	694,000	98
Newsprint	988,280	954,259	97	924,000	917,778	99	1,033,000	1,017,000	98
Tissue	772,480	648,429	84	1,334,000	1,192,735	89	1,370,000	1,348,000	98
Wrapping, Special Industrial	2,609,580	2,238,993	86	3,788,000	3,015,638	80	3,968,000	3,699,000	93
Building and Insulation	938,370	659,090	70	1,389,000	1,161,625	84	1,410,000	1,415,000	100
All Other	252,340	185,342	73	110,000	86,118	78	111,000	105,000	95
Total Paper	9,026,450	7,484,148	83	12,192,000	10,371,018	85	12,569,000	12,093,000	96
Paperboard and Building Board	7,530,960	6,025,494	80	11,762,000	9,956,204	85	11,856,000	12,207,000	103
Total Paper and Board	16,557,410	13,509,642	82	23,954,000	20,327,222	85	24,425,000	24,300,000	99

*Included in book paper uncoated.

Writing Paper Manufacturers Association

RITCHIE'S PULP FORECAST

James L. Ritchie, executive director, U.S. Pulp Producers Association, sees a chance for more pulp supply in 1951 if there is restraint in controls and if full North American potentialities can be realized.

This he told an audience at Paper Week in New York. Summarized, his review and predictions follow:

"The supply of wood pulp available for domestic consumption in 1950 was the highest on record. This country's aggregate new supply of wood pulp last year totaled over 17 million tons, exceeding the 1949 new supply by 24% and the 1948 supply by 14%. The new supply of market pulp also established an all time record in 1950. Market pulp supply last year totaled 3,424,000 tons, exceeding the 1949 new supply by 37% and the 1948 supply by 9%.

"Expansion of domestic pulp capacity during the postwar period averaged over a million tons a year. Despite this phenomenal postwar expansion, the domestic pulp industry in 1950 enjoyed almost the highest operating rate in its history. Total domestic pulp production in 1950 broke all records. Production for the year totaled 14,827,000 tons, exceeding 1949 production by 22% and 1948 production by

15%.

"The supply of domestic pulp that will be potentially available for domestic consumption in 1951 will depend upon a number of factors, some economic, some political. Indications are that the level of domestic capacity will continue to rise in 1951.

"If the domestic industry is successful in resolving its production bottlenecks in 1951 and if the defense requirements of the government do not absorb too large a proportion of its production, there would appear to be some prospect of a potential increase in domestic pulp supply this year as compared with last. This conclusion would appear to be justified in the case of market pulp as well as 'own use' pulp.

"This country's imports of wood pulp from Canada in 1950 totaled 1,712,000 tons, exceeding 1949 imports by 30% and 1948 imports by 7%.

"Barring work stoppages due to shortages of materials or services or to other causes, current expansion in Canadian capacity and fuller utilization of existing Canadian facilities could result in larger exportable surpluses. In 1950 the U.S. received 92% of Canada's total exports of wood pulp. Whether or not it receives a comparable share in 1951 could depend

in large measure upon the scope, nature and reasonableness of domestic price and distribution controls and upon Canada's views to the relative urgency of competing export demands.

"In 1950, the U.S. received 668,000 tons of market pulp from Europe. This tonnage was equal to 19% of our total domestic new supply of market pulp.

"Most observers seem to feel there will probably be some reduction in the supply of market pulp available from overseas in 1951. The reasons cited are (1) the prospect of further integration of European pulp, particularly in Finland, (2) increased demands upon the European supply to meet Europe's needs, and (3) the fact that supply will be dependent upon current European production, rather than production and inventories. The risk of a major diversion of U.S. imports from overseas, in the event of too rigid price and distribution controls, is a further consideration.

"If the full potentialities of North American supply can be realized and if the prospective decline in imports from overseas can be minimized by restraint in domestic controls, there is a good prospect that this country's total supply of pulp in 1951 may exceed that of 1950."

THE PULP SITUATION

North American Supply Outlook is Good; But World Balance Will Be Close for Years

TELLS THE FACTS ABOUT WOOD PULP DEMAND AND SUPPLY

Revealing facts about worldwide and North American wood pulp supply and demand trends were presented by Mr. Turcotte, of Bellingham, Wash., in this address given before the American Paper and Pulp Association in New York, Feb. 22.

It was the first time a chief officer of a leading market pulp producing company has stepped before an audience of paper manufacturers in a formal meeting—and this was an open meeting—to tell them the facts about their fiber resources.

The North American outlook for years to come is good, even though demand for wood pulp is steadily increasing over the long pull. But not so for the worldwide picture.

By **LAWSON P. TURCOTTE**
President, Puget Sound Pulp & Timber Co.

In order to review the wood pulp record of 1950, let's look at the domestic production approaching 15 million tons, augmented by imports considerably over 2 million tons, which gave wood pulp consumers in the U. S. more than 17 million tons of new supply in 1950. Yet, at the end of a year in which new production and import records were set, there was a shortage of pulp. With other pulp-hungry countries bidding up prices, a substantial change in import supply sources developed, creating a situation of direct concern to consumers who depend upon market pulp to meet their requirements.

This nation's mills turned out 14,776,000 tons of wood pulp in 1950, against 12,185,000 tons in 1949, and topped the previous production record of 12,872,000 tons made in 1948. Imports supplied the industry with 2,377,000 tons, in comparison with 1,763,000 tons in 1949, and 2,176,000 tons in 1948. Exports took just 93,000 tons in 1950, leaving 17,060,000 tons of new supply for domestic use, compared with 13,852,000 tons in 1949, and 14,946,000 tons in 1948.

Throughout 1950 the trend of domestic production was upward, with the best gain being shown in the final quarter. Total output rose from an estimated 3,475,000 tons in the first quarter to 3,635,000 tons in the second quarter, 3,170,000 tons in the third quarter, and 3,956,000 tons in the fourth quarter.

Fluctuations in imported pulp tonnages were relatively unimportant in total amount, but important changes did occur in the amount reaching our shores from different countries. Shipments from Canada and Newfoundland continued the rising trend which has prevailed for sometime past, but shipments from Scandinavian countries declined appreciably as the year progressed.

Arrivals from Sweden, Finland and Norway during the fourth quarter were just about half those of the first quarter of 1950, dropping from 244,000 tons to 122,000 tons between these two periods. This was exactly the reverse of the trend in 1949, when imports from Scandinavia

rose from 55,000 tons in the first quarter to 245,000 tons in the fourth quarter.

As on previous occasions when pulp has been in short supply, converting mills which depend upon the market for their principal or entire pulp supply feel the pinch most of all. Their interest is not in the total supply, but in the relatively small portion which is available as market pulp. To them it is a significant fact that more than half of all market pulp is imported, and nearly one-third of our imports have originated in Scandinavian countries from which last year's shipments were in sharply declining amounts—as demand increased in other world markets and at more attractive prices than in the U. S. market.

Million Tons Lost in '49

If we review these figures which I have given you on production and imports for the three years of 1948-1949-1950, it is plain to see that the production loss of 1949 has been a severe blow to the pulp consumer in the U. S. and one from which the supply and demand situation has not yet recovered. Well over a million tons of pulp production was lost in 1949, counting loss of domestic production of over 700,000 tons and the balance in foreign production.

This downward trend in business, starting late in 1948 and continuing into 1949, caused heavy cancellation of pulp orders. This in itself was serious, but to add to the seriousness of the situation many consumers not only quit buying but also liquidated their inventories. The market pulp producers, as soon as they had filled all their warehouses with inventory, only had the alternative of shutting down their

plants, or curtailing production, while others operated on shorter work weeks.

If I may work backwards, the pulp producer had of necessity to curtail his wood purchases and this, particularly in the Pacific Northwest, can be a serious matter as the logger moves his equipment to other non-pulp timber stands, the building of roads into timber ceases, and it usually takes a year to get over an interruption of this nature and get going again in the pulp timber.

It would be foolish of me to stand here and say that the pulp consumers could have taken into inventory all of this million tons or more available, but I would venture to throw out the suggestion that, spread over all of the converting mills in the U. S., a substantial portion of it could have been taken into inventory without unduly jeopardizing their financial resources and with this inventory well scattered throughout the hundreds of converting mills, it certainly would have alleviated to a great extent the present situation of fiber shortage prevailing all over the world. Besides, this extra supply could have been purchased at very attractive prices and would have had a steadying effect on world pulp prices.

But now I can say pretty much the same thing about some pulp producers. I do know that in 1949 curtailment of pulp production discouraged the pulp producer in his raw material procurement and we, like the pulp consumers, missed some excellent bargains in wood procurement. I think this is pretty good Monday morning quarterbacking. So I guess we all missed the boat one way or another. So much for the past. What about the future?

Forecasts Increasing Demand

Speaking of the North American continent, I do not believe the supply and demand situation is very far out of balance, but from a world standpoint it is, and I look for a very tight situation for quite a few years to come and it is natural that as more dollars are earned by foreign countries, the demand for North American fibers will grow more insistent. With the recovery of Western Europe, Great Britain, and the Asiatic countries, this demand is here now and becoming more and more insistent, while on the other hand there does not seem to be very much hope of increasing fiber production anywhere else excepting on this continent.

Besides this strong foreign demand, additional fiber-consuming machines are continually being installed in the U. S., Canada and other countries. Per capita consumption of fiber products is rising all

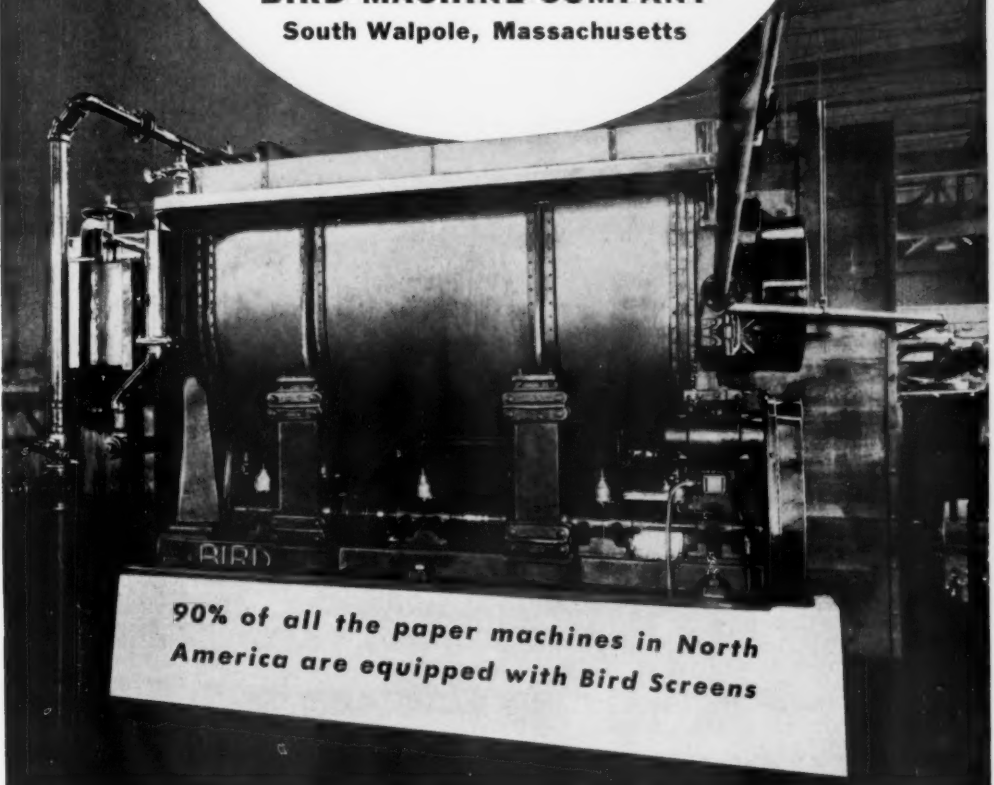


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over the world. Populations are increasing at rapid rates, so all I can see is that we are going to need a substantial amount of additional pulp capacity. Even without any changes in standards of living, population increase alone will require it and we must not overlook the fact that a substantial tonnage of pulp will be lost over a period of years by lack of wood supply adjacent to some of the present producers.

In the chemical pulp supply field, let us remember that of eight world areas covering production and consumption of chemical pulp—consisting of North America, Latin America, Northern Europe, Eastern Europe, Western Europe, Central Europe, South Africa, Asia and Pacific, only one area (and that is Northern Europe) shows a production in excess of consumption; in other words, the other seven world areas must import chemical pulp to supplement their production.

New mills will have to be built further away from the market centers as an efficient pulp operation must be of substantial daily tonnage and be backed by very substantial timber holdings, especially when one considers the cost of building a pulp plant today, and these substantial timber holds are getting further and further away.

With the proper timber supply there is no reason why additional capacity will not be provided. We do know the initial investment is high, that interest on the investment will be substantial. We also know that taxes are too high and not likely to go lower, so, doing a little arithmetic on some figures picked out of the air, it would look something like this:

Say you had a 350-ton per day pulp mill built prewar, all paid for, and on which your depreciation was \$4.00 per ton, and you made a profit before taxes of \$6,000,000 and the tax rate, to make easy figuring, was 50%, you would have a net profit of \$3,000,000, and you would retain \$4.00 per ton depreciation on 125,000 tons, or \$500,000 or a total income of \$3,500,000.

Now let us start on one today, and the 350-ton per day pulp mill cost 40 million dollars, on which your depreciation was \$20 per ton and interest \$5 per ton spread over an amortization period. Although you would have a disadvantage of \$21 per ton in cost of production, consisting of \$16 depreciation and \$5 interest, figuring your wood and conversion costs were the same but with a 50% tax.

The profit before taxes on the new mill would be \$3,375,000 as against \$6,000,000 on the old plant, but the Federal tax would be \$1,687,500 instead of \$3,000,000, leaving a net profit of \$1,687,500 for the new mill, compared with \$3,000,000 on the older plant, but adding back the depreciation of \$16 per ton on the new mill, which would amount to \$2,000,000, the total profit and depreciation retained would be \$3,687,500 for the new mill as against \$3,500,000 on the older plant.

So with at continued firm demand, I believe that additional pulp mills will be built, but it is easy to determine that consumers will have to get used to a higher

plateau of pulp prices than we can still remember in the 30's; otherwise, such new mills could not operate with their much higher fixed costs. And I mentioned earlier such development of further pulp production is dependent upon a substantial wood backlog. There are still quite a few areas which meet this requirement, some more favorable than others, but eventually all will be used, and when we add all of the areas together, we can say with confidence that the raw material will be available on the North American Continent.

Reviews World Situation

In other parts of the world the wood supply situation is not at all satisfactory, and if I may take the time I would like to quote from the Pulp, Paper and Board Industry Report of the U. S. Department of Commerce of Nov., 1950.

"Although the U. S. pulp and paper industry does not envisage serious over-all difficulties during the near future in acquiring adequate supplies of wood to support their production at required levels, pulpwood shortages are becoming a hazard in other parts of the world. In fact, they currently represent a major deterrent to a vitally sought-for increase of paper and board production in France and the United Kingdom as well as being a serious supply problem to the pulp industries of Sweden and Norway (which formerly exported moderate quantities of wood for pulping). The first two countries are suffering from the complete withdrawal of the U.S.S.R. and Poland from the pulpwood export market. The U.S.S.R. alone in the prewar period exported over a million cords of pulpwood, much of it going to Western Europe; and the countries of that area, particularly England and France, are now endeavoring to secure replacements of the deficit, principally from Canada. In respect to France, whose recent supplementary supply of wood from the Black Forest has reportedly been exhausted, the E.C.A. has made a grant of \$3,400,000 for purchase of pulpwood in Canada.

Austria, which exported over 200,000 cords in a prewar year, is now handicapped by high production costs and lack of mechanical equipment. Germany, too, a prewar exporter of as much as 300,000 cords (in 1937) is no longer a vital factor in the European supply pool in consequence of its dismemberment and the overcutting of its important areas. Notwithstanding this trend, Western Germany is finding sufficient wood to accomplish a fairly steady improvement in pulp production.

In the Far East, Japanese pulp mill stocks of pulpwood at the close of July were over 100% above the same date in 1949. While this upswing in wood stocks would seem to indicate a favorable situation in respect to wood pulp production, the latter is reported by trade observers to be substantially below present needs. It is estimated that Japan will supplement its fiber requirements by the purchase of \$1,500,000 of bagasse from Taiwan during the fiscal year ending June 30, 1951.

There is little likelihood that the overseas scarcities of pulpwood as previously outlined, will affect the domestic supply except for the indirect influence of increased demands on Canada's pulpwood surplus.

Canada has reported plenitude of pulpwood timber and can, no doubt, spare appreciable quantities to supplement the growing European requirements. The 8% to 10% of entire U.S. pulpwood receipts that originate in Canada will quite possibly continue to be available to our mills, subject to the Canadian policy of a more intensive conservation of its unprocessed forest products. The latter program is likely to reduce total Canadian pulpwood exports to all points over the long pull.

So you can readily see that the answer to the pulp supply situation is the wood supply, and if I may quote another short statistic, this will show the steady increase in forest growth since the turn of the century. This shows the new annual growth and removal for four periods covered by Federal appraisals (in U.S.).

New (U.S.) Annual Growth All Timber

	Cubic Feet
1918	5,995,000,000
1929	8,912,000,000
1936	11,287,000,000
1944	13,370,000,000

Removal All Timber

	Cubic Feet	Times new growth timber
1918	26,049,000,000	4.34
1929	16,351,000,000	1.83
1936	13,463,000,000	1.19
1944	13,661,000,000	1.02

The gap is steadily narrowing and timber growth and consumption are moving into balance which is most important to the pulp producer as well as the pulp consumer, so with this improved situation added to virgin forests still available on the North American Continent, I repeat that additional pulp producing facilities will enable our countries to continue with its high standard of living as far as products made from fiber are concerned. Whether there will be sufficient on a world-wide basis is problematical.

Continually new wood supply is available to the pulp manufacturing industry as witness these trends in the past 25 years:

The use of billions of feet of hemlock and balsam in the production of pulp.

The use of the pines.

The use of hardwoods.

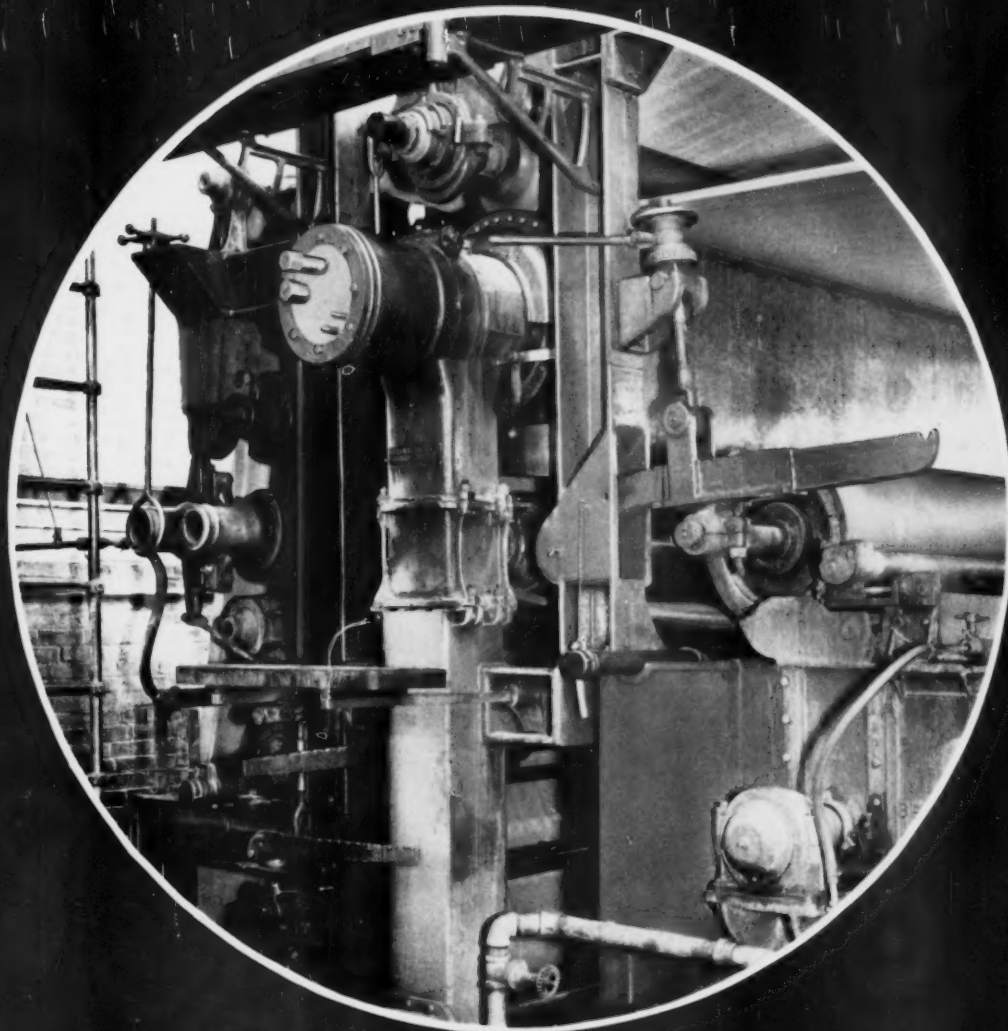
Now the use of Douglas fir and percentages of cedar.

The use in these new fields has greatly enhanced the raw material supply to the pulp producer, and is most important to the pulp consumer.

Conclusions

I have tried to leave the following thoughts with you:

Firstly: That the next time business



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A Beloit Suction Drum Press results in production increases of 10% to 25%, depending on previous water-removal methods. Sheet quality and strength are improved, bulk can be increased when desired,

felt cost per ton of paper is lowered, and checks are sharply reduced. Since the first installation in 1935, mills have reported that the Beloit Suction Drum Press has been "a most profitable investment."



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world supply situation, and this applies to wood as well as pulp supply. Add to your inventory instead of depleting it. All, of course, within one's financial ability to do so. This will minimize loss of productive capacity, and will make for steadier prices.

Secondly: New pulp facilities will be constructed to provide for our increasing population to provide for new develop-

ment in fiber uses, to maintain our high standard of living, but they will, of necessity, have to be built in more remote areas where there is ample timber. This will also give our more accessible timber lands a chance to grow more timber per acre, by delaying the cutting of too young trees.

Thirdly: Production costs in newer plan will be high so we must be ready

to accept a higher plateau of prices, and this is more or less true of all raw materials.

And Lastly: The wood supply for pulp manufacturing is in good shape for our domestic use, but world demand for pulp without a world supply of raw materials will make for a very close situation in supply and demand for a long time to come.

THE HYDRA OF PULP ALLOCATION

Four-Point Plan to Voluntarily Solve the Problem

By Robert H. Evans

Newly-Elected President of American Pulp Consumers Association

This was Mr. Evans' inaugural address as head of an industry group which has grown tremendously in breadth and interests. We have only gently edited his speech, made in New York in Paper Week, in order to better highlight all important points of it for our readers.

Mr. Evans, now assistant to the president and assistant to the executive committee of Olin Industries, speaks with authority in his warning that pulp allocations—now—would be like "performing a quadruple amputation because the patient has a slight cold."

He called himself "an old China hand in the matter of pulp allocations," recalling that he and Keville Larson of Weyerhaeuser had this delicate responsibility in World War II in the War Production Board set-up.

By definition our membership consists of paper mills that purchase the larger part of their wood pulp requirements in the open market. In recent years, we have been somewhat put on the defensive because of this fact. There is certainly no discredit attached to being a converter mill. Actually, the converter mill should be as proud of his position as any other company in this industry. We support mighty market pulp enterprises in the U.S., Canada and Scandinavia. Without mills like Rayonier, Soundview and Weyerhaeuser, which in peacetime depend upon the sale of market pulp to non-integrated consumers, the government would have been hard put to find enough raw material for the smokeless powder needed to win World War II.

The converter mill often manufactures specialty papers not available from any other source. Many of these papers were essential to the conduct of the last war and are equally vital today.

The converter mill represents small business in its finest sense, not seeking special or unwarranted advantages but demanding recognition of its right to live on the basis of its legitimate contribution in peace, mobilization or war.

The converter mill is also distinguished by the fact that in many cases it is a one-man or a two-man show. These men carry great burdens of responsibility.

It goes without saying that we favor an expansion of facilities to produce market wood pulp because we know that entirely apart from the market wood pulp shortage that already exists, the country is faced with a nitrating pulp program of undetermined but potentially vast proportions. The National Production Authority has before it numerous applications for construction of new and expansion of old facilities for pulp and paper and we hope they will be granted. We know, however,

that even with the most favorable action on the part of Washington, these facilities will take 18 months to two years before they accomplish much to relieve the supply of market pulp or nitrating pulp.

It is awfully easy to adopt a "do nothing" attitude and either hope for the best or look to Washington to intervene in the situation. The fact is, however, that if the paper business continues at the present level, all our waiting and hoping is not going to overcome the substantial gap between market pulp supply and demand. Our secretary has figures to show that during 1951 we will suffer a deficiency of 400,000 tons in supply of market pulp, or in round figures approximately 15% of the 1950 rate of consumption. Since we have no inventories, this means that we are faced with a reduction of market pulp consumption of approximately the same percentage in 1951. Unless we do something about it, we will have 15% less running time on our paper machines in 1951.

... Despite attempts to secure secondary fiber, the converters are going to be short.

In the course of time and under stresses much greater than those that now exist, we may be forced into a program of pulp allocation. Under present conditions, I cannot help thinking that it is performing a quadruple amputation because the patient has a slight cold. Once we are embarked on a program of pulp allocation, it

is a process rather difficult to stop. Some leaders have predicted we may live in a state of mobilization for ten or 20 years. When we go into wood pulp allocation, we are putting on a strait jacket for whatever period the emergency lasts. . . .

If we go into a program of pulp allocation today . . . we have no inventories and would have to go into full-fledged controls from the very start. Thereafter, allocation becomes such a simple and effective means of controlling the entire industry that it offers a field day for those interested in government control of business. It can become, as it did in the last war, the means of deciding, not by the ordinary process of supply and demand, but by the determination of a few men in Washington, how many grocery bags the housewife shall have, how much wrapping paper industry shall have, how much printing paper publishers shall have; even such questions as whether we shall have facial tissues or paper napkins. . . .

I want to testify from personal experience that in the third quarter of 1945 when Swedish pulp had already started to flood our markets, to the extent that some mills had to refuse delivery allocations from the War Production Board, it was not at all easy to get the allocation order M-93 repealed. There was no shortage of Government personnel willing and able to carry on the administration of this order, even if the rest of us thought it was time to leave. . . .

I believe certain steps can be taken which will postpone the necessity of pulp allocation for some time and possibly until a change in business conditions or completion of new capacity can forestall the necessity for allocation entirely.

A Four-Point Program

The most obvious step to take at the present time is the reinstatement of the limitation orders of the type of L-120. It would seem to be only common sense to behave like other essential industries and take steps to conserve and stretch out the available supplies. A reduction of basis weights would in many sections of the industry permit either an increased

(Continued on Page 108)

Congratulations
to our good friends at
POTLATCH
on their grand accomplishment

The new 216" Fourdrinier
Kraft Machine is
Rice Barton all the way
from Flow Box
through the Winder

Rice Barton Corporation
WORCESTER MASSACHUSETTS





HERE'S PANORAMA VIEW OF THE CLEARWATER TREE FARM OF POTLATCH FORESTS, INC. It is from here—about 100 miles northeast of the mill at Lewiston that the wood comes for both the new Pulp and Paper Division and Clearwater Lumber Division. Headquarters, Idaho—the main logging camp, is in open area seen

at extreme left. This tree farm consists of thousands of acres of timber, mostly white pine, which is being scientifically logged by Potlatch. This picture was taken from Billings Point, dedicated in 1949 to the late C. L. Billings, former Potlatch Exec. Vice Pres. and Gen. Mgr.

POTLATCH FORESTS, Inc.

NEW PULP AND PAPER DIVISION

OUR COVER AIR PICTURE



Here is reproduced the portion of the cover picture which shows the new Pulp & Paper Division of Potlatch Forests, Inc. Above are shown:

- 1—Paper Mill (800 ft. long).
- 2—Power and Recovery.
- 3—Pulp Mill and Bleach Plant (Screen Room is lower connecting section between Pulp Mill and Paper Mill).
- 4—Veneer Plant (built in 1949).
- 5—Rough Lumber Storage (4 buildings).
- 6—Across the Tail Race—Lumber Division Shipping Department and Planing Mill.

In our cover picture—but not shown in this small reproduction—the Sawmill and Sawmill Power Plant will be noted at extreme upper right. In right foreground of the mill area on the cover, the new General Office Building can be seen—a smaller white exterior building which has knotty pine interiors.

Our cover picture is a spectacular visual demonstration of how Potlatch has integrated its various wood use industries on the Clearwater, aiming for more efficient use of resources. Note the linking conveyor lines—3,500 ft. of them—carrying chips from sawmill to storage to Pulp Mill, flitches to Veneer Plant, and hogged fuel in either direction to either of the two Power Plants at extreme left and right. A mountain of hogged fuel was accumulated behind the Pulp and Paper Division.

The air view was taken from above the town of Lewiston and the confluence of the Snake and Clearwater Rivers, on the Idaho-Washington state line, looking up the Clearwater River. Hills rise sharply on the left side of the river. First white men to see this spot were Lewis and Clark, a century and a half ago. They sailed through here in canoes; returned horseback and on return journey camped across the river, just opposite the pulp and paper mill, with Nez Perce Indians.

On a wide bend of the Clearwater River in North Idaho, where Lewis and Clark camped with the Nez Perce before other white men came in search of converts and gold, a modern new industry has risen. Here now is the pulp and paper industry's newest modern mill, making a wide range of bleached and unbleached kraft containerboard, tag stock and kraft papers, integrated scientifically with production of lumber, veneer and other forest products. It is bringing far more wealth and a better life to this region than the goldseekers and missionaries ever imagined.

A century and a half ago, Lewis and Clark, led by Sacajawea, sailed past this spot, happy to escape the turbulent upper Clearwater with only a few canoes lost, and just a few minutes beyond here they sailed into the "goslin-green" Snake River, joyously—but mistakenly—acclaiming it the Columbia, just as they had previously mistakenly acclaimed the Clearwater. Nearly a century ago, another Indian maid, Indian Jane, whose grave looks down on the new mill, led white men to gold in nearby hills. And just 74 years ago, in hills to the South, Chief Joseph led his

Nez Perce in a "victorious" delaying action and retreat before the U. S. Army.

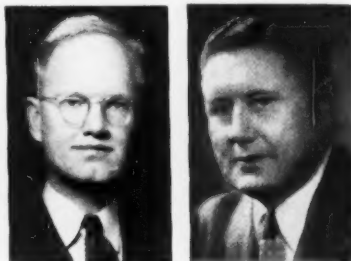
Potlatch Forests, Inc., whose history as a logging and lumbering enterprise founded by Weyerhaeuser interests of St. Paul, traces back to 1906, started up its new pulp and paper mill on the Clearwater above Lewiston, Idaho, in the last week of 1950. Here is the first paper mill in Idaho and four adjoining states. Here is the first mill making products from virgin wood pulp in a great sweep of 14 Rocky Mountain and Western Plains states, approximating half the continental area of the U. S.

These states constitute the bulk of the Louisiana Purchase. A Southern president, Jefferson, made that buy—biggest territorial addition ever made to the U. S.

ON OPPOSITE PAGE:

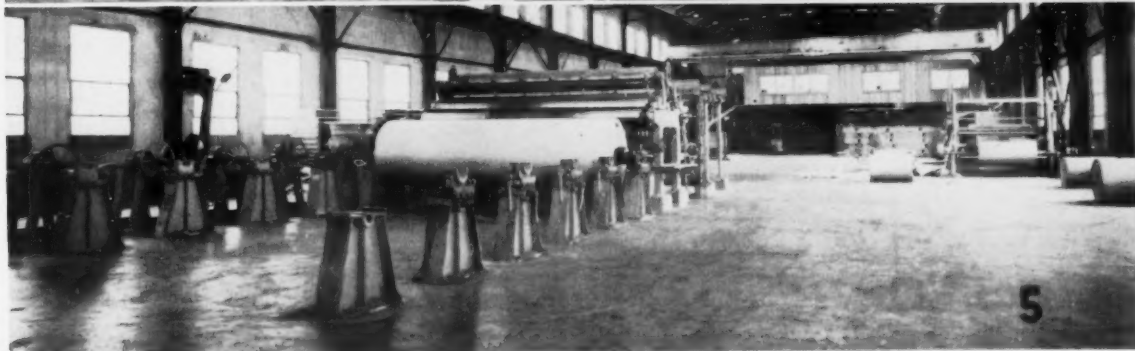
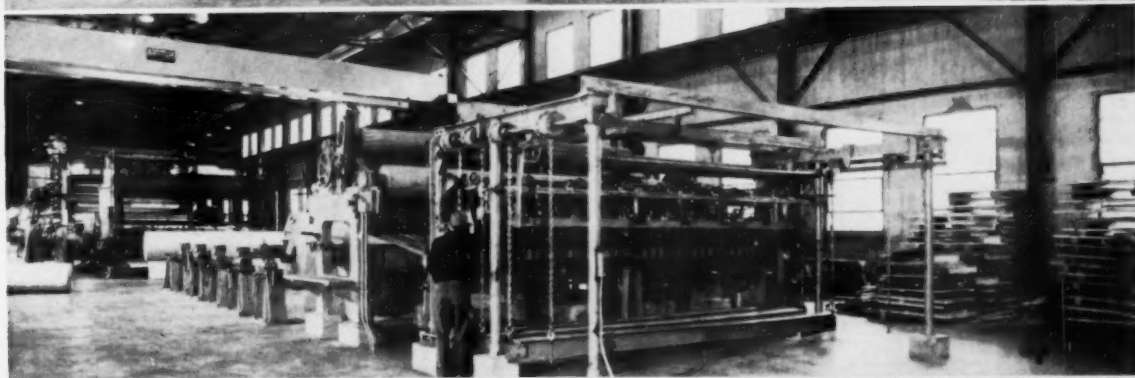
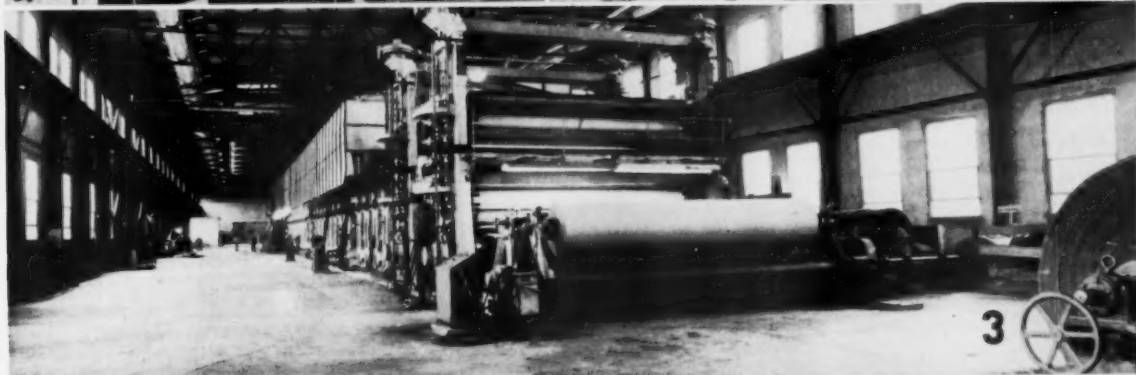
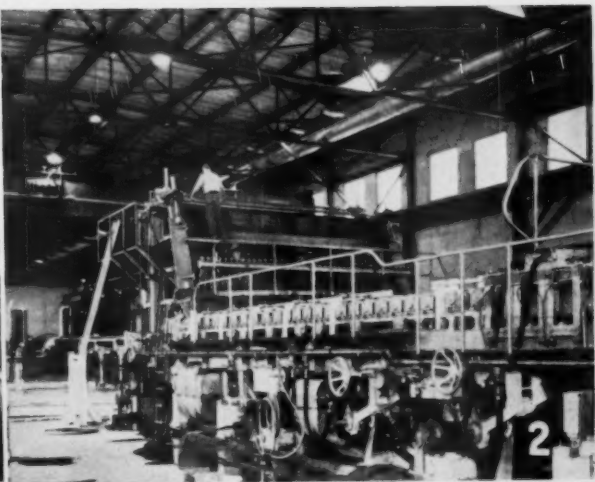
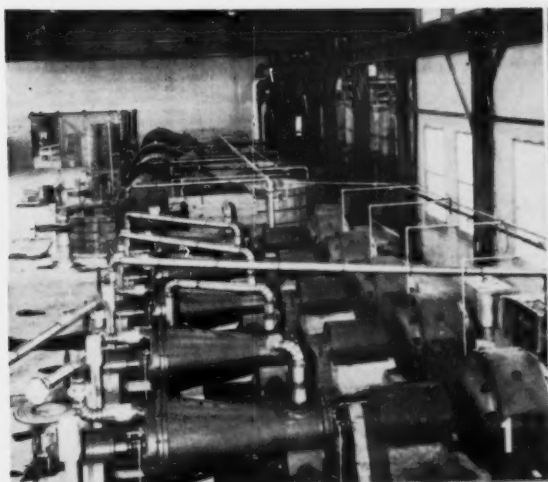
Views from one end to the other of 800 ft. long Potlatch Paper Mill by PULP & PAPER:

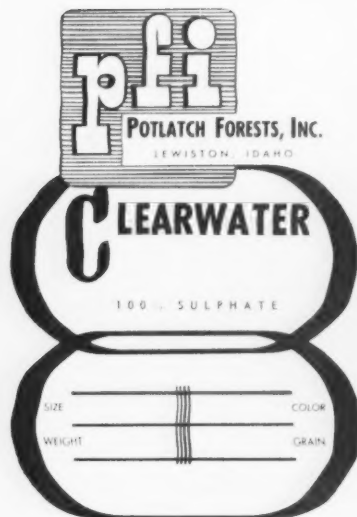
- 1—Five Jones Majestic Jordans powered by 400 HP GE Motors, and behind them 4 large Jones Hi-Speed Beaters. Small diameter stainless steel piping. At upper right rear of room is adjoining wall-less screen room, offering visibility from one spot of entire machine room and Screen Room.
- 2—Wet end of Rice Barton 216-inch Paper Machine. Headbox is open type with high pressure inlet. Height indicated by man.
- 3—Full length view of machine from dry end.
- 4—Rice Barton two-drum Winder is followed by Six-Roll Backstand, 196-in. Layboy and Slitter, all supplied by Moore & White Co.
- 5—View from other end of Finishing section to end of mill. Note Superintendent's Offices on mezzanine at far end, with sweeping view of entire mill. This is familiar location for offices to visitors who have seen Southern Kraft mills.



G. F. JEWETT (left), Chairman of the Board, and WILLIAM P. DAVIS (right), President of Potlatch Forests, Inc.

Mr. Davis, builder of several big Southern mills including first mass production container board mill in world, succeeded Mr. Jewett in the Presidency in 1949 when the decision was made to add a Pulp and Paper Division.





"CLEARWATER", the river on which Idaho's first paper mill stands, is the trade name adopted for its products. The wood used comes largely from Clearwater National Forest to the east of Lewiston. This reproduction of the label used for the products also bears the PFI initials of the company.

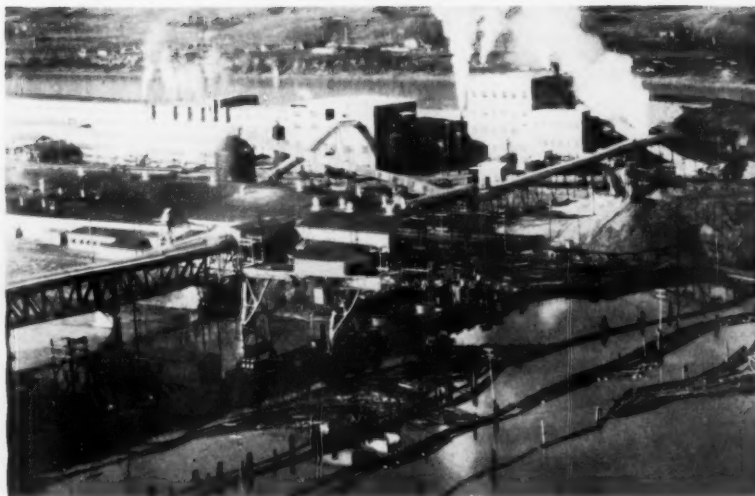
—and sent two Southerners, Lewis and Clark, to size it up. A century and a half later, Mississippi-born William P. Davis, became Potlatch's president and general manager and took west with him a crack team of Southern pulp and paper mill builders who made industrial history in the Far West in the construction and smooth startup of the Lewiston mill. The whole Louisiana Purchase cost Uncle Sam just \$15,000,000, the price of just an ordinary standard pulp and paper mill today without any trimmings (an interesting comparison but we, of course, are not suggesting this typical cost is the tag on the new Idaho plant).

Integration of Wood Products

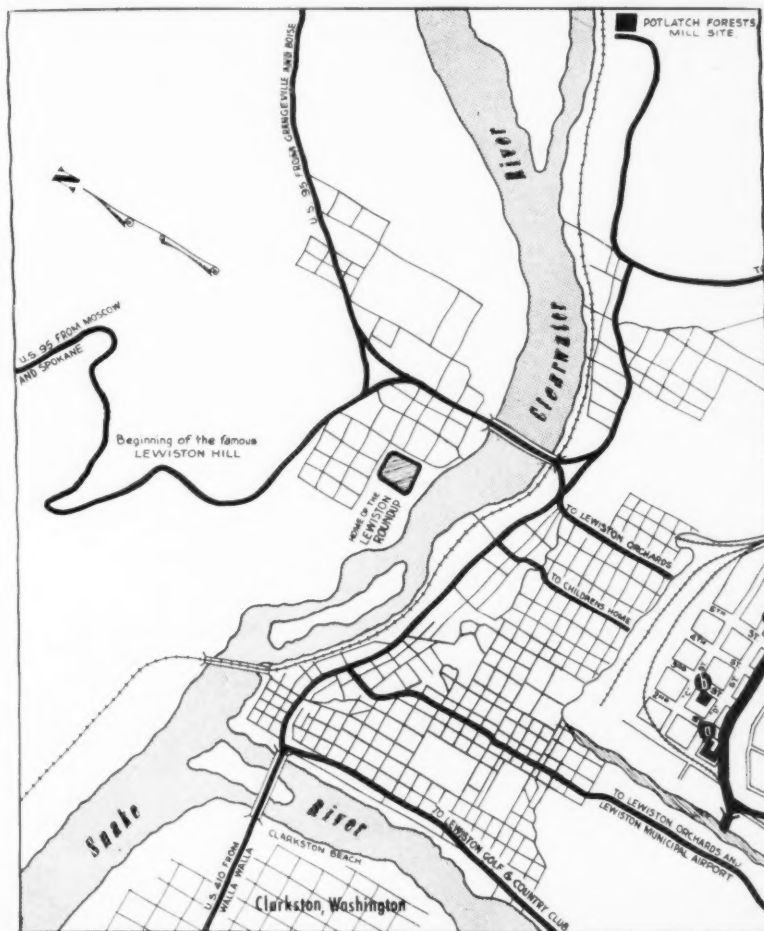
The first Potlatch sawmill was built at Potlatch, Idaho, in 1906. The second went up at Coeur d'Alene in 1916, the third and largest is the Clearwater division at Lewiston, built in 1927. Like the others it was a separate company, with J. P. Weyerhaeuser, Jr. as president and general manager. The three companies were merged in 1933, with R. M. Weyerhaeuser as president.

In the '30's, Potlatch developed Pres-to-logs, sawdust briquets and pebble-size stoker fuel as by-products. A box factory ships pine boxes from Lewiston. In the '40's its Industrial stock department was started, making trim and edgings from the mills to exact order for toys, curtain rods,

POTLATCH FORESTS' NEW PAPER MILL is at extreme upper right corner of the map. The famous Lewiston hill where road winds up 11 miles to Washington state line is at right center. This road leads north 112 miles to Spokane, Wash. In the downtown areas of Lewiston two dark spots show City Hall and Elks Temple. Across Snake River at bottom of map is Clarkston, Wash., and from this point southward the upper Snake River is for many miles the border between Idaho and Washington and Oregon. From Lewiston it loops north and westward into Washington to join the Columbia to the sea.



POTLATCH'S NEW PULP & PAPER DIVISION as viewed across log pond dam from Sawmill Division area. Left to right in background are: The long Paper Mill; Pulp Mill (first high structure); Screen Room; Power and Recovery Plant (highest structure). Building with curved roof in foreground is Veneer Plant. Note extensive conveyors carrying chips from sawmill to dark circular chip storage silo and from its base to top of Pulp Mill; also hogged fuel in either direction to or from interlinked Power Plants of two divisions.



Potlatch Forest's New 800 ft long machine room with it's modern



View of Potlatch Forest's new machine room with ROSS Insulated Panel Hood over machine and ROSS Heating and Ventilating apparatus above. Insert shows & exhaust fan outlets from the hood. Other ROSS equipment includes heating and ventilating systems for Beater Room, Finishing Room and Basement as well as Calender Cooling.

"Paper Over" was announced by Potlatch Forest's, Inc. in slightly more than 11 months from the day ground was broken for their great new mill at Lewiston, Idaho. On that day it became the first mill to make and use virgin wood pulp in an entire area extending over 14 states. Another epochal event in which the dependable ROSS Air Systems played their important part in helping to insure maximum operating efficiency throughout this notable new mill.



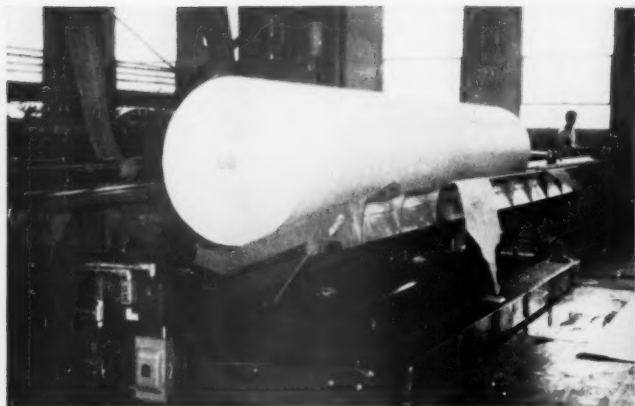
J. O. ROSS ENGINEERING CORPORATION

MANUFACTURERS OF AIR PROCESSING SYSTEMS

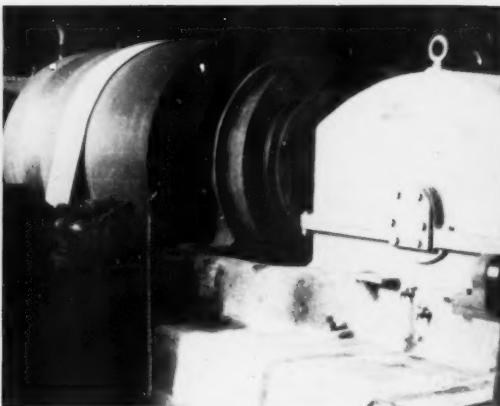
444 MADISON AVENUE

NEW YORK 22, N. Y.

201 N. Wells Street, CHICAGO-6 • 79 Milk Street, BOSTON-9 • 9225 Grand River Avenue, DETROIT-4 • 600 St. Paul Avenue, LOS ANGELES-17
ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL, CANADA • CARRIER-ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND



THIS IS A "CORELATOR"—new piece of equipment suggested by Potlatch staff and built by American Mfg. Co., which is a winder/unloader, power driven on track between winder and roll wrapper, and also raises and lowers rolls up to 25 tons for shaft-puller seen at right corner.



CLOSEUP VIEW OF RICE BARTON Mechanical drive for Potlatch paper machine, equipped with Hypoid bevel gear unit with a Fawick Airflex clutch between it and driven pulley. There are 13 of these units on machine. Drives are belted to line shaft on ground floor below. C.B. type Fawick clutches are used.

recently for beds in Korea. In Aug. 1949, a new veneer plant started up on the Clearwater.

And on Dec. 28, 1950, the new pulp and paper mill, designed for 130 tons of paper production per 24-hour day, began steady operation. Thus, after 45 years, another one of the major lumber companies on the continent has entered the pulp and paper field.

"This diversification of forest products and coordination of lumber and pulp and paper operations is the greatest stabilizing influence and most important development in woods industries today," President Davis told PULP & PAPER. "It makes possible more selective logging, use of Idaho wood species which are not in demand for lumber, and more security for our investors, employees in mill and woods, and the communities in which we operate."

There is plenty of room in the 800 ft. long machine room to add dryers and extend the present machine for greater capacity. A Transite end wall would facilitate extension and along one side-wall there are "tie-ins" already provided so if the wood production and market economics warrant, another machine room could be erected with greatest possible facility.

Wood Resources

Today the Potlatch sawmills are cutting about 250,000,000 bd. ft. of logs annually.

SERVING POTLATCH Machine is this Allis-Chalmers 15,000 GPM Fan Pump. Note size compared with man. Also large diameter welder Alaskan Copper Works-fabricated piping for stock.

With hydraulic log barking introduced at the Clearwater unit, the slabs and trim, which had been burned, now goes into paper. The Clearwater unit alone has capacity for 200,000,000 bd. ft. of lumber annually. "Long butts," small logs, broken logs, as well as slabs and trim and species not desired for lumber—all go to the pulp mill.

Logs for both sawmills and pulp mill at Lewiston comes from the company's Clearwater Tree Farm, about 100 miles northeast of Lewiston. Large tracts of timber are being scientifically logged, in a way now that will permit survival of the lumber industry, as well as the new paper industry. Actually, Idaho is a truly green state with some 80 tree farms in all, covering 600,000 acres, available for future industrial use. Potlatch has access to large areas of private forest lands besides its own and state forest lands. In addition to this, the linking National Forest lands may be selectively logged. Potlatch has given the University of Idaho land grants of 7,000 acres as well as scholarships to further forestry science.

The annual spring log drives down the Clearwater to Lewiston are spectacular. Drives start at Elk Berry Creek, 92 miles northeast of the mills. The 1950 drive, herding 54 million ft. of logs, took 27 days. In other years the longest was 85 days,

the shortest, riding a flood, was five. Sometimes logs have broken through log pond booms, escaping down the Snake, even into the Columbia before being recovered. Incidentally, these mills have navigable water outlet to the Pacific Ocean by these rivers—over 450 miles—but the value and demand for paper will require speedier railroad delivery.

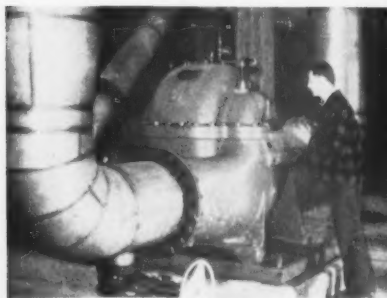
General Mill Construction

Regarding general construction of the pulp mill and also the paper mill, and adjoining new power and recovery plant—several general characteristics catch the eye. These are the obvious extreme flexibility of process flow. Every opportunity is taken to permit by-passing, diversion or changes in flow, not only to meet emergencies but for variety of end-product. Another striking feature is the strategic positioning of units for the greatest possible visibility by a few key operators—in effect, it all presents what might be described as the last word in planning for push-button pulp and paper manufacturing.

For instance from one corner of the pulp screen room, one can see in one direction the beater room and entire sweep of paper machine room—no walls and only a minimum of pillars blocking vision. In another direction, the operating floor of pulp mill and other floors of both

ALLIS-CHALMERS Vibrating Chip Screen, low head type, installed in Potlatch Sawmill Division. Blower at upper left carries chips to it.

ALONGSIDE DORR CAUSTICIZING system at Potlatch is this 140-ft. long, 8 ft. diameter Allis-Chalmers lime kiln, supplied by lime mud from Dorr system.



NOT 1...NOT 10...NOT 50

Yes, 62 rubber rolls went into this magnificent Rice Barton Fourdrinier paper-making machine for Potlatch Forests, Inc., at Lewiston, Idaho!

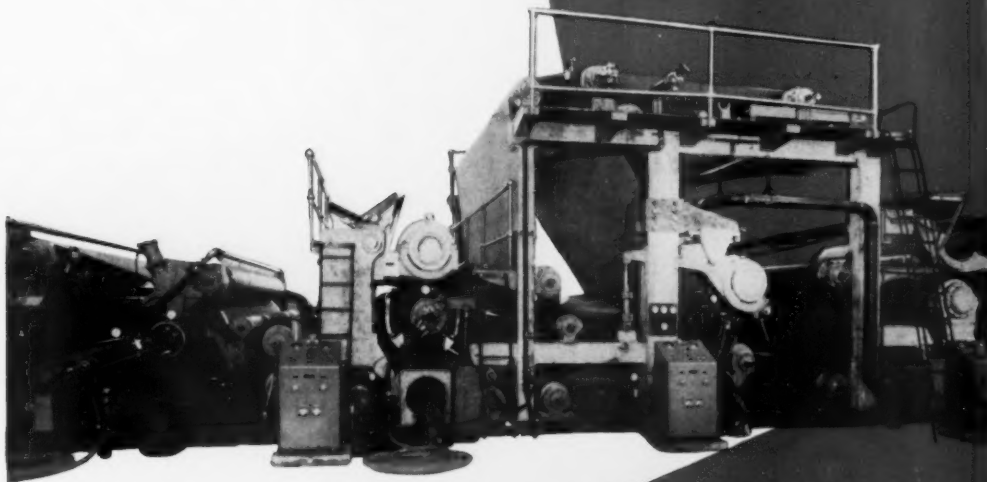
Each of these rolls was covered and precision-ground by Stowe-Woodward, Inc.

Of these 62 rolls, 4 are *MICROROK*-covered. *MICROROK* is the hardest and most durable compound yet developed for the paper industry as a tough, peak-performance roll covering for smooth press, wet press, and size press service.

MICROROK® is an exclusive Stowe-Woodward development.

BUT...

62!



Stowe-Woodward, Inc., is proud of its contribution to this important project and of the confidence placed in it by Rice Barton Corporation and Potlatch Forests, Inc.

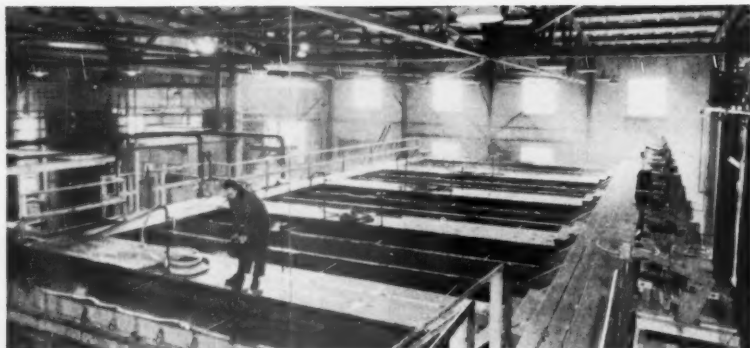
STOWE-WOODWARD, INC.

Newton Upper Falls 64, Massachusetts

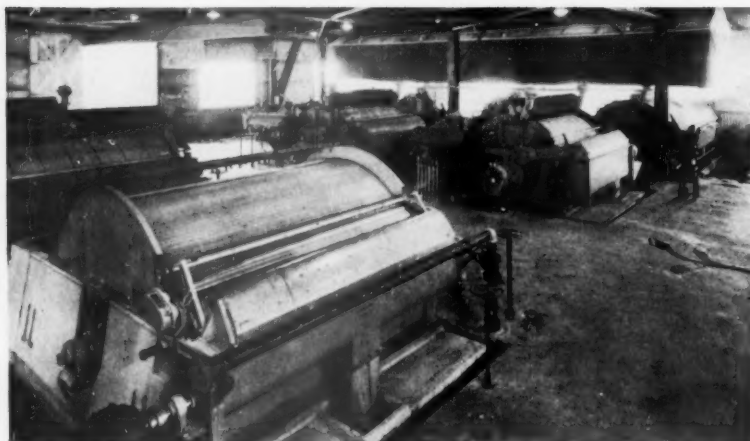
Craftsmen in rubber

New York Office: Woolworth Building, New York 7, N. Y.

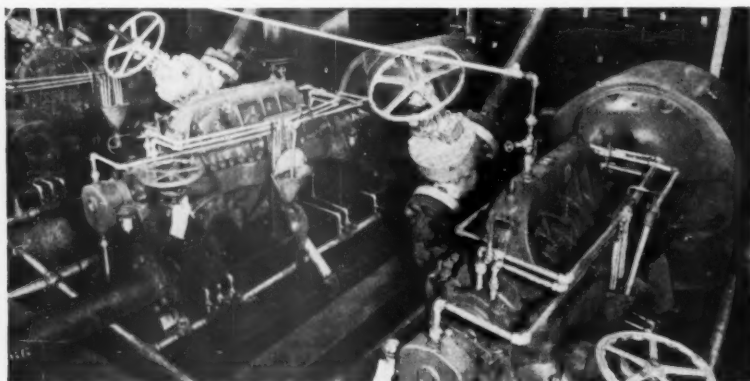
STOWE-WOODWARD rolls are made on the west coast by Huntington Rubber Mills, Inc., Seattle 4, Washington



OPERATING FLOOR OF POTLATCH Washing and Bleaching Systems at top of Pulp Mill. Note excellent visibility—steel truss roof support eliminating need for posts. Improved Paper Machinery Corp. engineers co-operated in design and supplied equipment. Impco deknatter and countercurrent washers under hood in background are in operation, while 3-stage Impco bleach plant in foreground is being bypassed. GE motors and Pacific-Western speed reducers provided drives for all washers.



SCREEN ROOM AT POTLATCH MILL. Here again excellent visibility permitted by open construction is evident. Roof trussing eliminates posts. Here are ten lines of Impco 28-plate flat screens with Magnus Metal stainless plates—six for brown stock and four for bleach stock. Pulp mill is at left; paper mill at right—with no walls separating.



BINGHAM PUMP CO. supplied Potlatch Forests with these three heavy duty multi-stage 800 gpm pumps for the hydraulic barkers—powered by two GE 800 hp. motors and one GE 945 hp. steam turbine. There are two barkers—one pump and steam turbine being spare units which also provides steam for thawing of logs in winter.

bleach plant and pulp mill are visible. Such an amazing perspective of operations is a triumph of engineering, no less. The general roominess and generally straight line operation in all units of the mill are features that impress a visitor. From the central doorway to the plant turbine room one can see without hindrance everything in the 800 ft. x 75 ft. paper mill—beaters, jordan, machine, finishing equipment and finally the mezzanine offices of the paper mill superintendent at the far end. That glass-windowed raised floor of offices has full perspective of the big room and it is built in such a way that it can be moved back if the mill is extended.

Construction features included corrugated asbestos siding on part of the pulp mill and the power plant to allow for possible expansion; pre-cast concrete slab roofing and bonderized steel sash for all windows. All buildings were constructed with the modern technique of slip forms.

J. W. Park & Sons of Yakima, Wash., who also built Weyerhaeuser's new kraft pulp mill in Longview, Wash., and kraft board mill at Springfield, Ore., were general contractors. Structural steel was done by Stupp Bros. Bridge & Iron Co. of St. Louis, who also supplied a 30 ton 73-ft. span crane. Star Machinery of Seattle supplied four 5 to 15 ton cranes.

At this point, it should be observed that the primary object at Lewiston was to get the mill into production as soon as possible. Many items, regarded as unessential for the startup, were left for later decisions or experimental development. Only basic instrumentation is used and instruments are from Brown Instrument Div., Minneapolis Honeywell Co., from Foxboro Co., from Bristol and Bailey Meter. The management decision was to go into instruments slowly, as they proved themselves desirable for the particular processes.

Wood Preparation

Wood preparation for the new paper mill is in the sawmill division. At the top of twin log hauls for long and short logs are two hydraulic ring-type whole log barkers designed by Hansel Engineering Co., of Vancouver, B.C., and Seattle, and manufactured by Washington Iron Works, Seattle. These are among the first of a new design by Sydney Hansel, British engineer now in Canada, which have achieved an unusual water conservation with micarta strip packing, thereby virtually solving the principal bugaboo of ring-type water barkers. The two barkers are 70-inch and 40-inch diameter sizes, served by three heavy duty multi-stage 800 gpm. 1500 p.s.i. pumps (one a spare) supplied by Bingham Pump Co., Portland, Ore., and powered by two General Electric 800 h.p. 2300 volt 3-phase induction motors. One GE 945 h.p. steam turbine is for the spare pump and provides steam for preliminary thawing of logs in winter.

In the changes necessary to the sawmill, 12 Pacific-Western Gear Works double reduction speed reducers were selected to operate the log hauls, log conveyor and log transfer drives. Both barkers are driven by Pacific-Western right angle

(Continued on Page 64)

FAWICK CLUTCHES FULFILL VARIED OPERATING REQUIREMENTS ON POTLATCH MILL SECTIONS



Fawick "CB" Clutch in RICE BARTON Drive at Potlatch Forests Mill.

Experienced paper mill operators are quick to recognize the advantages of a drive clutch that will meet the varied operating requirements of the different sections of the paper machine.

Ranging from "inching" of individual sections through slow or fast acceleration and full operating torque, each clutch must meet its sectional operating requirements to provide proper unit coordination and overall efficiency. The Fawick Airflex Clutches incorporated in the RICE BARTON drives for the new Potlatch Mill do just that.

As part of the RICE BARTON drives on the Couch, Presses, Dryers, Breaker Stack, Calenders, and Reels, Fawick "CB" Clutches

provide operating characteristics best suited to the efficient operation of each section. In addition, Fawick "E" Brakes function with equal efficiency on the dryer drives.

The simple rugged design and construction of Fawick Airflex Clutches and Brakes provide long trouble-free clutch life under severe operating conditions. Your paper mill drives will operate with greater efficiency if they are Fawick equipped.

FAWICK AIRFLEX CO., INC.
9919 CLINTON ROAD • CLEVELAND 11, OHIO



For specific information on all advantages of Fawick Clutch and Brake units, write to the Main Office, Cleveland, Ohio, for Bulletin 300.

NEW POTLATCH SELECTS PACIFIC-WESTERN

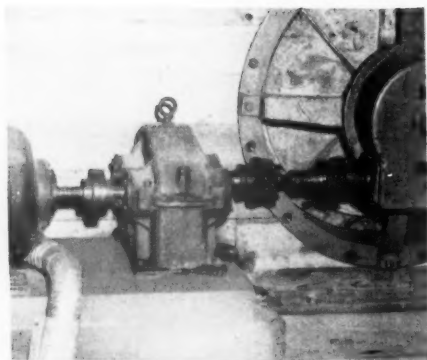
*Idaho's First Pulp and Paper Mill
Utilizes Pacific-Western's Over 50 Years
of Service to the Paper Industry*

WHEN POTLATCH FORESTS, INC., planned Idaho's first pulp and paper mill at Lewiston it was appropriate that skilled Pacific-Western application engineers should be called in to specify the speed reducers for the new operation.

During many years of activity in the forest products industry Potlatch has used dependable Pacific-Western equipment for both new and replacement gearing.

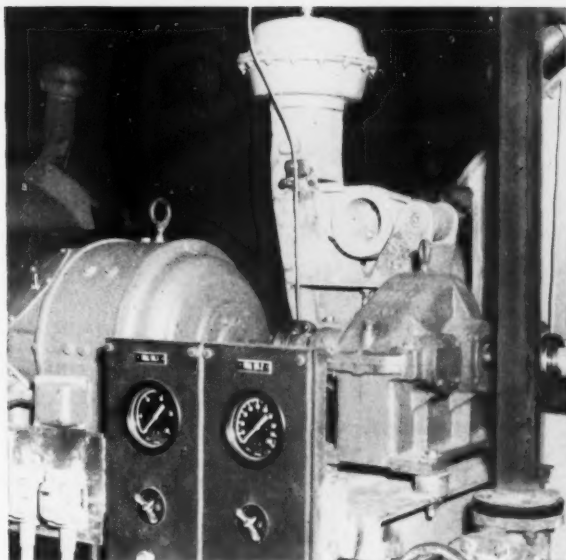
To meet the special needs of this customer 35 Pacific-Western speed reducers were recommended and installed in the pulp and paper mill and in the wood room. Typical applications are illustrated.

If you have a problem in power transmission, get in touch with the Pacific-Western plant or office nearest you. Trained specialists are ready to give your requirements careful study. Specify Pacific-Western and be sure.

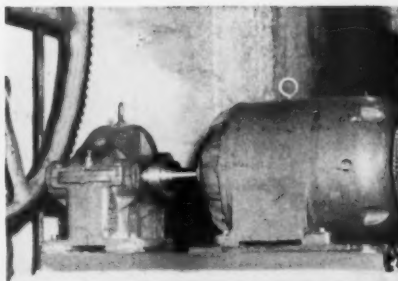


The Impco stockmeter at right is driven through a Pacific-Western S-51 speed reducer at a 9 to 1 reduction ratio.

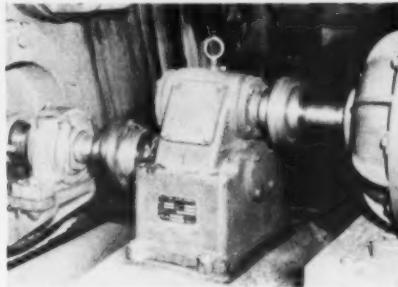
PULP MILL AT LEWISTON SPEED REDUCERS



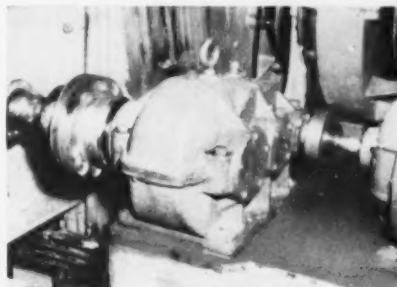
Vacuum cylinder drive on the bleach plant illustrated is driven through a Pacific-Western S-53 speed reducer at an 8 to 1 reduction ratio. Seven other S-53 speed reducers are used on similar vacuum cylinder drives in this newly completed mill.



Couch pit agitator in the photograph above utilizes a Pacific-Western S-53 speed reducer, 8 to 1 reduction ratio.



One of two submerged repulper drives on the Impeo vacuum washer is shown above. It is driven through a Pacific-Western VS-51 speed reducer at a 5.11 to 1 ratio.



Final repulper drive on washer is driven through a Pacific-Western D-48 speed reducer at a 12.22 to 1 ratio.

Plants • 417 Ninth Ave. S., Seattle 4, Wash.
1035 Folsom St., San Francisco 3, Calif.
2600 E. Imperial Highway, Lynwood, Los Angeles County, California
117 N. Palmer St., Houston 3, Texas

Representatives • 930 S.E. Oak St., Portland 14, Oregon
Room 211, Chamber of Commerce Bldg., Denver, Colorado
Engineering & Machinery Ltd., 1366 W. Broadway, Vancouver, B.C.

WESTERN GEAR WORKS 
Manufacturers of PACIFIC-WESTERN Gear Products
Pacific Gear & Tool Works

Plants: Seattle
San Francisco
Lynwood
(Los Angeles County)
Houston
Representatives:
Portland
Denver
Vancouver, B.C.

POTLATCH

(Continued from Page 60)

speed reducers. These units were specially constructed for dependable operation under the severe water spray condition in the barking area.

Essentially, this most recently designed type of barker consists of a cast nickel-chrome steel ring rotor and spaced at 90 degrees are four machined nozzle openings directed to center of the ring through which logs pass. Water jets of 1100 to 1500 p.s.i. strike the logs, cutting away the bark, as the inner ring rotates inside a stationary member. The method of sealing the high pressure water between rotating and stationary parts is by pressing steel sealing rings in side plates against Celeron ring strips on each side of the rotor, the pressure being from water behind the ring. Economy and control of water; minimum maintenance and ability to take any length of log, are advantages of the Hansel barker.

Following the barker, two 96-inch Simmonds Saw & Steel Co. inserted-tooth cutoff saws cut the logs to desired lengths and there is a splitter for any that may be too large in diameter for processing. Log decks before and after barker have Link-Belt steel chain and Link-Belt multiple strand Promal chain handle blocks through the splitter and this chain is on trips to divide slabs between two 40-in. belt conveyors feeding the two D. J. Murray Mfg. Co. chippers. Chippers are driven by two GE 250 h.p. 60 cycle induction motors with 16-groove, Allis-Chalmers V-belt drives on each. An Allis-Chalmers low-head vibrating chip screen follows, with an Archer Blower blowing chips up to the screen. Reject chips go to a Sumner Iron Works rechipper.

Link-Belt conveyors totaling over 3,500 ft. handle chips to a storage silo and then to the pulp mill and also hogged fuel to the new power house. Five Pacific-Western single reduction speed reducers and two Pacific-Western double reduction speed reducers were selected for driving the chip and fuel belt conveyors. Two Link-Belt vibrating screens separate barker refuse from water in the sawmill. Interesting is the fact that in mid-1950 Potlatch stopped sale of hogged fuel and a huge mountain was accumulated outside

How Potlatch Abates Pollution

Potlatch Forests, Inc. has left no stones unturned to find ways of reducing air and stream pollution in the lumber mill town and farming area of inland Idaho, where they have built the first pulp and paper mill. But more than that—it has taken unusual steps to achieve abatement, installing all the latest known devices.

For months before construction, numerous studies were made. The Institute of Paper Chemistry, Appleton, Wis., was retained to make a biological study of the Clearwater River. U.S. Health department, Washington state and Idaho state pollution and stream authorities and other agencies sent 14 chemists and pollution experts to Lewiston for further studies and these studies will be repeated this summer. A meeting of the Water Resources Advisory Board of the Northwest was held there.

Potlatch figuratively "stuck its neck out" by arranging to conduct periodic cooperative fish count with the Idaho Fish and Game Department of fish ladders at the mill dam and hydro-electric plant, both on the mill's grounds on the dike forming the log pond. This count started before the mill was built and will continue at intervals.

The company has contributed substantially to industry-wide research for scientific development of new ways to reduce both air and stream pollution.

Two asphalt membrane-lined settling basins have been built to hold and aerate mill effluent during low water periods and thus eliminate any remote possibility of toxic harm to fish in the river. The basins together will hold effluent for 51 hours of mill operation. Also a half mile long asphalt-impregnated wood stave pipe was laid to carry effluent down below the city water plant—230 ft. being laid by divers in the bottom of the river at the outlet.

Of course, the conventional kraft process used at Lewiston holds any possible river pollution to a minimum. Besides this, a new type of gas scrubber has been installed to further reduce toxic compounds, as described in this article. Further closing of the system in the pulp washing department is made possible by re-using dilute wash. An Oliver "save-all" is installed to salvage fiber losses that otherwise might go to the stream. Wet bark refuse and waste can be burned in a new type of boiler along with coal and oil. An electric precipitator collects chemicals from escaping combustion gases and a 125 ft. high stack carries gases off up the valley.

the new power house. The conveyor line for hogged fuel from sawmill to the new power house can be reversed in case of shutdown and carry hogged fuel to the old power house. For power, sawmill and pulp and paper mill thus are linked together in case of emergencies, and also are tied in with a public power plant.

At bottom of the chip storage silo is a steel hopper and a Link-Belt rotary plate chip feeder, similar to other modern installations of this kind, much more efficient than the old style chip feeding. The feeder is driven by a Pacific-Western right angle triple reduction speed reducer with output shaft vertically up. This unit is a size BHVT-5, with 90:1 ratio, and is driven by a General Electric Motor, 20 HP at 1750 RPM. A 36 in. Link-Belt conveyor, troughed on 45 degree idlers, carries chips to the pulp mill. The other

belts—for chips from sawmill to storage and those for hogged fuel—are 30 in. on standard 20 degree idlers. A unique feature here was conversion of an existing 30 in. flat belt used to carry flitches from sawmill to veneer plant. Flat rolls on carrying side of this belt were replaced with Link-Belt picking table idlers which produce a wide, shallow trough. Minor changes at the head allowed the belt to be used to carry chips continuously to surge bin except for short periods each day when accumulated flitches are run to the veneer plant.

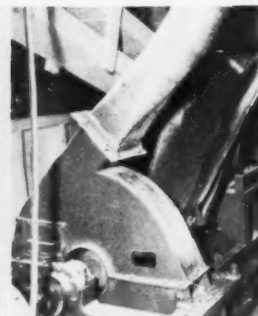
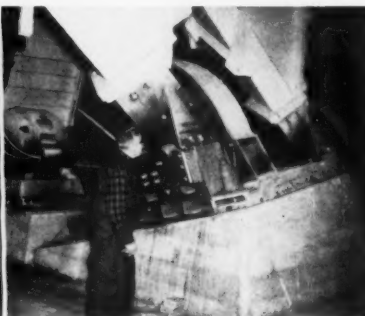
The Pulp Mill

In the pulp mill, direct cooking is done and controls are separate for the four digesters. The plant is three stories high, a Link-Belt tripper, sharing levels with the bleach plant. Cooks are two to four hours, at 110 lbs. pressure, using the basic

CHARLES S. BARTON, now new President of Rice Barton Corp., at left, who flew out to Lewiston for startup of Potlatch paper machine, and O. B. SMITH, Gen. Supt. of new mill, at hydraulic controls at dry end.

IN POTLATCH SAWMILL are these two D. J. Murray Chippers mounted in tandem and driven by two GE 250 hp. motors. Man beside installation indicates its size.

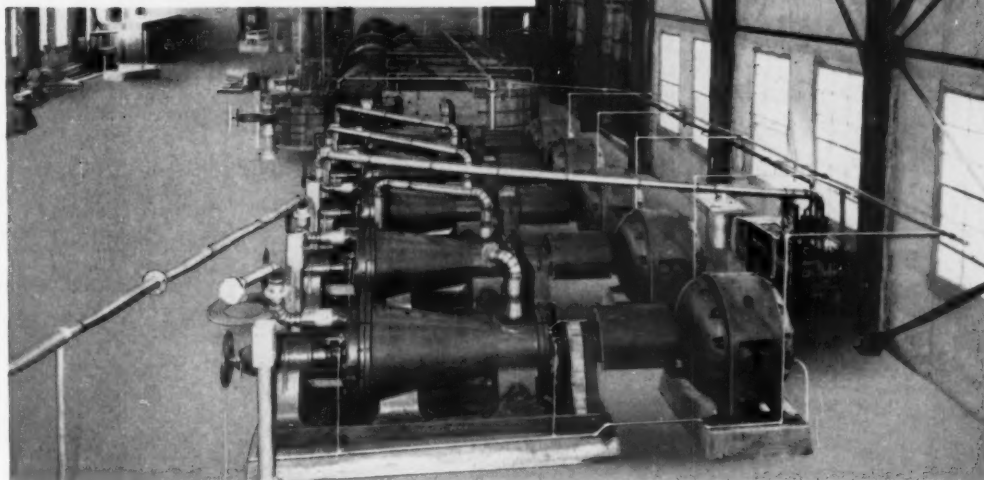
SUMNER IRON WORKS supplied this Rechipper for processing rejected chips after screening, thereby increasing efficiency of chip production for the new mill.





E.D. Jones

REFINING EQUIPMENT AT POTLATCH FORESTS, INC.



- ★ **Three Majestic Refiner Jordans**
- ★ **Two Majestic Finishing Jordans**
- ★ **Four 3000 lb. Standard Beaters**
- ★ **One 2000 lb. Broke Beater**
(not shown in illustration)

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Since 1904, E. D. Jones & Sons Co. (Established 1845) has specialized in the design and manufacture of stock preparation machinery.

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E. D. Jones & Sons Company, Pittsfield, Mass.

BUILDERS OF QUALITY STOCK PREPARATION MACHINERY

sodium hydroxide, sodium sulfide and carbonate of the kraft process. A Link-Belt motor-propelled tripper charges the Chicago Bridge mild steel 10 x 35 ft. digesters (2700 cu. ft. capacity each).

Blow tank, condensate blow accumulator, chip silo, various liquor, fuel, sizing and hot water tanks and bleach plant towers are by Hydraulic Supply Co., and total of 38 tanks varying in diameter from 3 to 92 ft. and in height from 3 to 75 ft.,

POWER AND RECOVERY AT POTLATCH:

- 1—Cochrane Corp. Hot Process Boiler Water Treatment installed by C. C. Moore & Co., Engineers.
- 2—Swenson Five Body Effect Evaporator.
- 3—Exterior view of Dorr Recausicizing Plant. Tanks by Hydraulic Supply Co.
- 4 and 5—Two views of Combustion Engineering-Superheater Inc. Recovery Boiler designed to 464,000 lbs. dry solids per 24 hrs. Behind it in No. 5 is D. J. Murray Mfg. Co. Cascade evaporators.
- 6—Turbine Room with General Electric 11,100 KW capacity 9-stage Turbo-Generator.

all fabricated by this Seattle firm. This group of tanks include all types such as leg, elevated, open top, self-supporting roofs, both conical and umbrella types. Weight of steel for these tanks and other items by Hydraulic Supply totaled two million pounds.

Ball type blow valves on the digesters were supplied by Paul Valve Co. of New York. A precision-ground ball is actuated by a venturi-ball principle for accurate control at all positions from wide open to tight shut. Allis-Chalmers and Bingham pumps are used generally throughout the pulp mill, as elsewhere for stock and white water pumping. All pumps handling bleach liquors, white liquor or bleached pulp are stainless steel. Allis-Chalmers supplied a Hi-Density feeder.

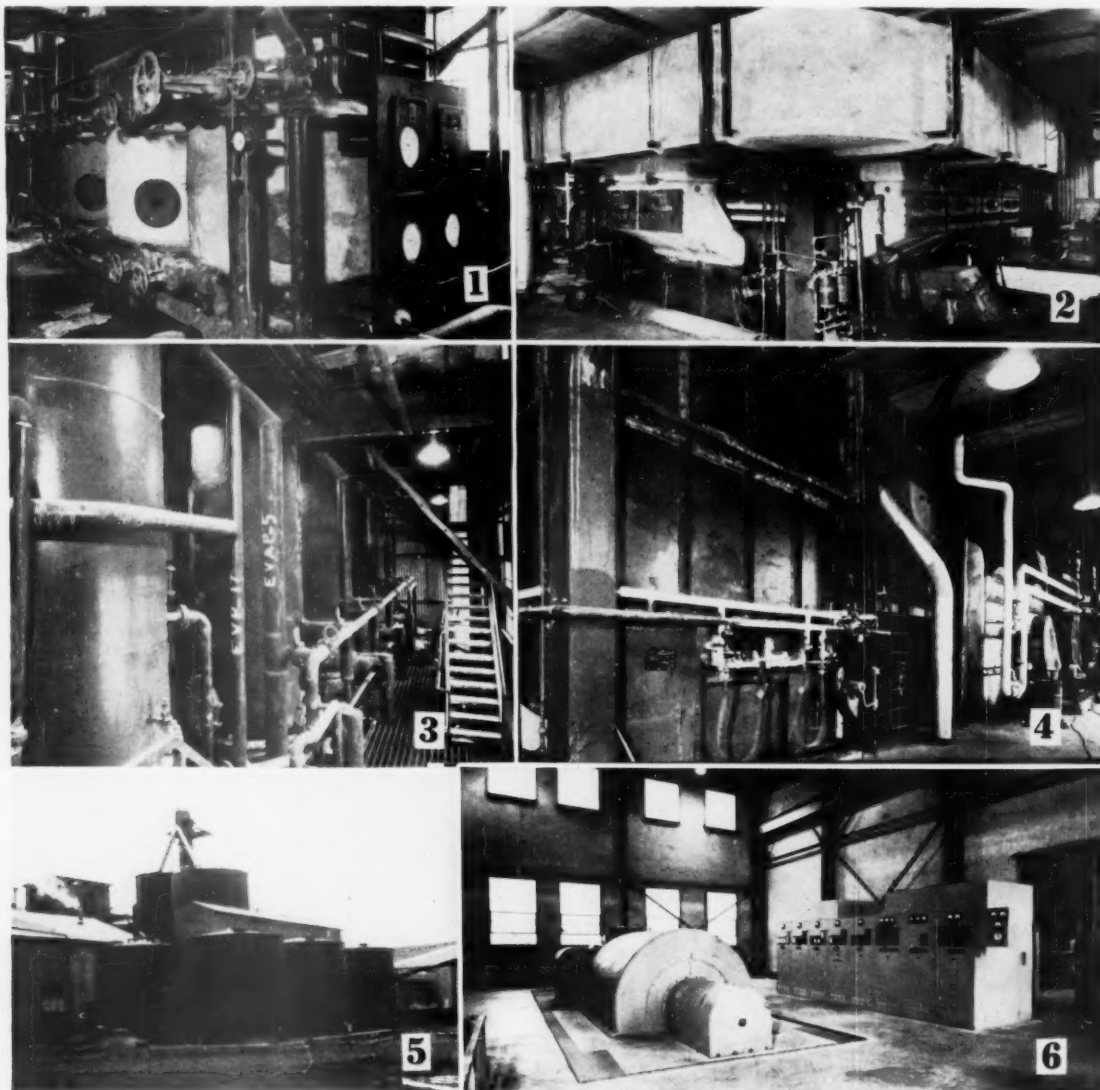
Stainless steel piping is particularly noticeable throughout the pulp mill and also a new type of fabricated stock stainless valves by W. J. Rovang Inc., Portland,

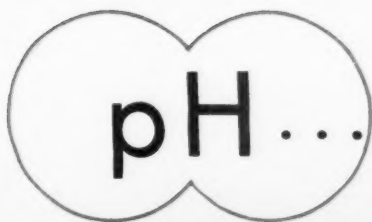
Ore. A total of 54 of them are used throughout the mill. A total of 10,000 ft. of stainless steel pipe was supplied by the Spokane office of Grinnell Co. of the Pacific and fabricated in sections by Alaskan Copper Works, of Seattle, and welded and installed at the mill site by specialists of Daugherty Co. Inc. of Youngstown, Ohio. Daugherty also installed other steel piping, furnished by Grinnell Co. of the Pacific. Atwood-Morrill relief and reverse blow valves are used extensively.

Washing and Bleaching

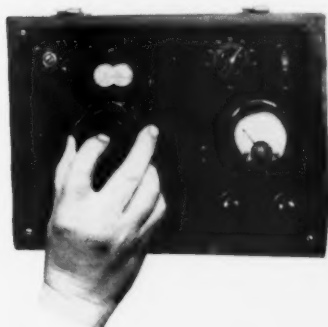
Pulp is pumped to the washing and bleaching sections. The operating floor and washers for both systems being in one large spacious room constructed without any posts interfering with vision. This is on the top floor of pulp mill and steel truss work supporting the roof eliminates all posts.

Improved Paper Machinery Corp. co.
(Continued on Page 70)





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Sodium Fluoride
Sodium Thiosulfate (Hypo)
Sodium Metasilicate
Sodium Silicate
Sodium Sulfide
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RELIANCE Sectional

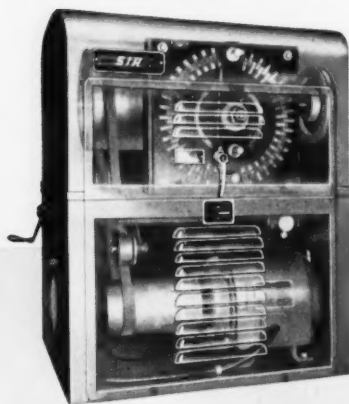
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Reliance Sectional Drive controls this book machine which not only forms and coats, but also supercalenders the sheet in one continuous operation.

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Reliance Sectional Interlock Regulator holds draws accurately at all speeds, is rugged, compact and dependable.

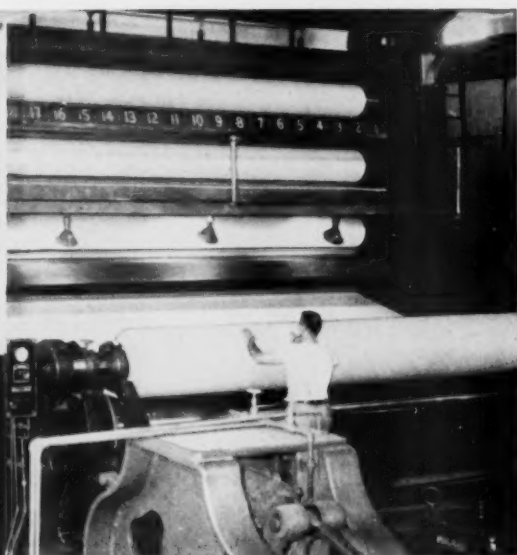
Supplied as an integral part of each drive motor in the system, the Reliance SIR is a simple, mechanical gear type differential regulator. Governed by a master speed reference for the entire motor drive, the SIR maintains the exactly correct speed relationship between sections. Compensation for shrinking or stretching of material can be made from the front or back side of the machine by means of speed adjustment of a Section Motor. Compactly designed and ruggedly built, the SIR has achieved a reputation for long, trouble-free service in a wide range of co-ordinated industrial processes requiring extremely accurate synchronization of motor drive speed.

Simplicity is keynote of typical Reliance individual section panels for modern paper machines.

"MOTOR-DRIVE IS MORE THAN POWER"

Paper Machine **DRIVES**

between all the sections of any paper machine...



Practical!

for Any Machine

at Any Speed

Coated Book at 1000 feet per minute

Board at 100 feet per minute

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Use of Reliance Sectional Drives reduces down time to provide maximum tonnage and profits. Above: 236" high-speed newsprint machine.

...the co-ordinated drives you can depend on for maximum production of paper of UNIFORM WEIGHT and QUALITY!

Employing a principle which has been tested and proved for years in more mills than all other systems combined, the Reliance Sectional Paper Machine Drive provides unsurpassed ease, accuracy and dependability of control over the paper-making process through all sections of any machine. Here is the simplest, most practical and economical means of maintaining precise speed relationships and correct draw adjustments between all sections. Reliance Sectional Paper Machine Drives are planned to suit the individual application by specialists backed by the Reliance experience of nearly 50 years in engineering co-ordinated motor drives. They are equally effective on the largest board machines, on wide, high-speed news machines, on fine paper machines. And a versatile mechanical "brain", the Reliance (SIR Section Interlock Regulator), makes each Reliance-engineered drive readily adaptable to all practices and conditions in the operation of any machine.

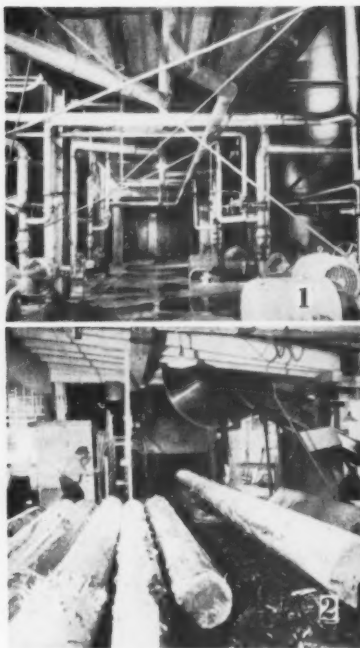
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Three Reliance SIR Regulators mounted integrally with Reliance Type "T" Heavy Duty D-c. Motors on Sectional Paper Machine.

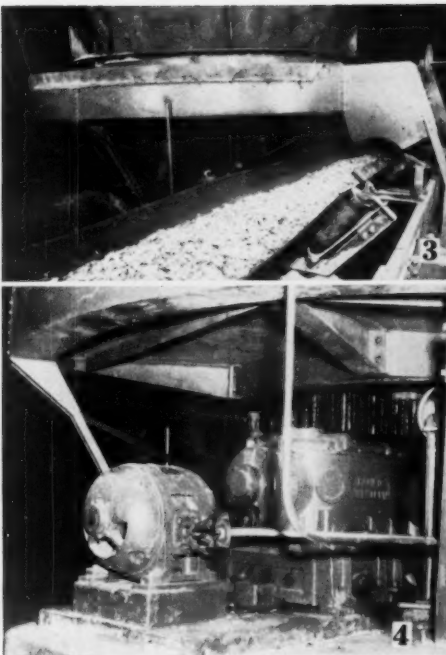
RELIANCE **ELECTRIC AND ENGINEERING CO.**

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1—Pulp Mill ground floor showing some of 10,000 ft. of stainless steel piping fabricated by Alaska Copper Works and supplied by Grinnell. New type stainless stock valves seen here by W. J. Rovang Inc. Allis-Chalmers and Bingham stock pumps.

2—Barked logs on deck after coming from Hansel hydraulic ring type barker in housing in back-ground. Washington Iron Works manufactured barker.



3—Link-Belt Rotary Plate Feeder below steel hopper at bottom of Chip Storage Silo.

4—Beneath the Feeder, and serving it, is this Pacific-Western Gear Works 90 to 1 ratio right angle reducer driven by GE motor.



5—Paul Valves, with precision-ground ball actuated by Venturi-ball principle for accurate control, are blow valves serving the four digesters.

6—Unusual photo inside dark interior of a stock chest, showing Chemtile lining by Chemical Linings Inc.

EQUIPMENT AT POTLATCH MILL:

POTLATCH

(Continued from Page 66)

operated with Potlatch engineers in design of bleaching and washing layout, as they did for screening and decking. Fourteen Pacific-Western Gear Works speed reducers were utilized by Impeco on equipment which they furnished. The vacuum cylinder drives were Single Reduction Reducers, Size S-53, ratio 8:1. The size BHV-3, Right Angle Reducer with output shaft vertically downward was furnished to drive the blow pit agitator.

Along one side of the bleaching-washing room is a lineup for washing—an Impeco vibratory deknitter to salvage unexploded chips and particles for return to digesters, followed by a row of three Impeco countercurrent washers to remove black liquor from stock with a minimum of dilution, before stock enters stock chests. Impeco supplied agitation for stock chests.

The major and central portion of the room is occupied by the Impeco five-stage bleach plant with three washers in one line, two in the other, and Brown, Foxboro and Bristol instrument board at one end of the middle aisle. Here is a DeZurik consistency regulator for stock and a Pittsburgh Lectrodryer dries the chlorine. The bleach plant will be cut into the system for white paper production, including sanitary food stock.

Caustic towers, hypochlorite towers and chlorinator were lined with corrosion-

resistant tile by Chemical Linings, Inc. of Watertown, N. Y., as were screen room and screen room white water and pulp chests. Seal boxes and other chests were completely erected of Chemtile by this firm.

Screen Room

In the screen room, adjoining pulp mill and bleach plant without walls, are two Impeco valveless vacuum deckers, one for brown stock and one of stainless steel for bleached stock. Above these on a broad deck are the ten lines of Impeco 28-plate flat screens with Magnus Metal Stainless Steel Plates, six lines for brown stock and four for bleach stock. On an intermediate level of the bleach plant is the pulp superintendent's office, but with open visibility of the screen room. At the opposite corner of the screen room, raised above it, is an Oliver United continuous filter 8 by 12 ft. rubber-covered saveall, at a key spot between pulp and paper mill. Its tile chest is by Chemical Linings. The saveall recovers white water solids from the excess white water produced by the paper machine, returning these to machine furnish.

Beaters and Jordans

Below and parallel to the screen room on the paper machine operating floor level and fully visible is the lineup of four large 3,000 lb. capacity E. D. Jones & Sons Co. Hi-speed beaters, each driven by a General Electric 200 h.p. synchronous motor.

These are followed by five Jones Majestic jordans, the last one ahead of the machine being fitted with stainless steel fillings. Each is driven by a 400 h.p. 2300 volt General Electric synchronous motor and there is a DeZurik regulator to jordans.

The piping over the jordans, all in Alaskan Copper Works fabricated stainless steel and installed by Daugherty, is an impressive sight. There is no screening ahead of the paper machine as it is all done on bleached and unbleached stock before it gets there.

Paper Machine—Wet End

The Rice Barton 216-inch Fourdrinier all-purpose machine, designed to make anything from heavy board to onion-skin type of paper, has operated smoothly right from the start and was already into its second month on its first wire, when last reported, which is a credit to both operators and machine builders. The wire did not have a single damaged spot. Idaho, being a long way from other mills, crews for this mill had to be composed largely of green hands, but the five hours it took them to put on their first wire will eventually be cut to an hour or less, it is predicted.

The Rice Barton open type headbox and high pressure inlet are of stainless steel. Headbox is 16 ft. high, with a Rice Barton adjustable slice, two distributor rolls, and an after-slice for heavy weights. Rice Barton Rectifying Rolls and R-B patent

(Continued on Page 72)

SIMONDS SAWS

in the new
Kraft mill of
**Potlatch
Forests, Inc.**
LEWISTON, IDAHO



"NOTHING BUT THE BEST" is good enough for this huge new modern mill at Lewiston, Idaho. And that's why you find Simonds Cutting Tools all over the place...Veneer Knives, Chipper Knives, "Red Center" Circular Saws...and, as shown here, giant "108" Inserted-Point Cut-Off Saws in the hydraulic barking plant.

Here, as in many other leading mills, Simonds Tools are chosen for their straight, clean cutting . . . their ability to "take it" under the toughest

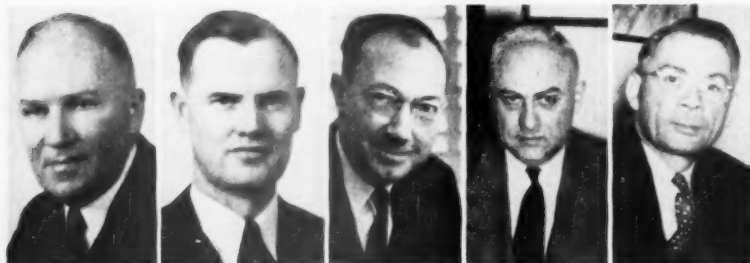
operating conditions . . . and their low cost in the long run. And if *you* want to know the real meaning of cutting-tool savings, tell your dealer to "supply Simonds" for every cutting job in your mill.



Branch Offices in Boston, Chicago, San Francisco and Portland, Ore. Canadian Factory in Montreal, Que.

THE STORY OF POTLATCH

(Continued from Page 70)



SOME OF POTLATCH'S TOP EXECUTIVES (l to r): O. H. LEUSCHEL, Asst. Gen. Mgr. in charge of mills; E. C. RETTIG, Asst. Gen. Mgr., in charge of logging; R. T. BOWLING, Chief Engineer of the company who invented Pres-to-Logs machine and designed and engineered new sawmill additions for barkers and chippers; H. L. TORSEN, Secretary-Treasurer of the company, and HARRY ROONEY, Director of Purchases. Not shown here is the third Asst. Gen. Mgr.—ROY HUFFMAN, in charge of new products.

Duplex Breast Rolls are features at this end of the machine. The Fourdrinier carries a 216 in. wire, 120 ft. long, trimming 200 inches for heavyweights and down to 196 for light. The Fourdrinier is unusual

in height off the floor—being about 8 ft. above floor level. It is supplied with an automatic motor-driven stretcher for wire. A 28 in. dandy roll is power driven. The press sections, in order, are: A first

press with Beloit suction roll, a reversing two-box second suction press, a plain straight-through third press and a smoothing press ahead of the first dryer section. The reversing second press is expected to improve finish and will prevent one-sided coloring. Pressure and lifting mechanism for an 18-inch lumpbreaker and all top press rolls have Tompkins Johnson cylinders and Vickers control valves.

Stowe-Woodward Inc. covered 63 rolls for the paper mill. Four rolls are covered with Microrok, a trade-marked new compound developed by Stowe-Woodward which is a hard white Stonite type of covering. These are the top rolls in the second and third press sections; bottom roll in the smoothing press and top roll in the size press. In these sections the other rolls, top or bottom, where rubber-covered, and the first press has both rubber-covered rolls. A lumpbreaker, breaker stack rolls, various felt rolls, 27 table rolls and wormed cutter squeeze rolls were among others rubber covered.

Paper Machine—Dry End

There are three dryer sections. First comes a 20-roll section of 5 ft. diameter paper dryers, then a breaker press; next are 14 more 5-ft. paper dryers and then a size press; and finally a section of seven 5-ft. paper dryers. There are four felt dryers in the first section and two in the second section. Next are the two Rice Barton calender stacks of eight rolls each with a 5 ft. dryer in between. King rolls are 32 inches in diameter and other calender rolls 16 and 20 in. This is followed by a Rice Barton heavy duty uniform speed reel with hydraulic controls.

A specially designed Rice Barton two-drum winder, with a 200 h.p. variable speed GE motor drive on each drum, is next. The winder rider roll also has an individual variable speed drive. Rice Barton doctors are used on the calender and dryers.

All dryers, presses, calender and winder rolls are equipped with SKF Spherical Roller Bearings, with the dryers supported by the SKF Rocker Mounting on the tending side. All total, about 800 SKF anti-friction bearings are used in this machine, ranging in bore size from about 2 to 21 inches. Fawick "E" Element assemblies are brakes on dryers.

A new piece of equipment is a winder unloader, an all-steel "Corelator," built by the American Manufacturing Co., Tacoma, Wash., according to an idea originally developed in cooperation with the Potlatch staff. This will lower or raise up to 25-ton rolls to any position required in order to pull the shafts and to lower them to the floor for roll-wrapping. It is shown in a picture with this article and is power driven on a track between winder and roll wrapper. An air-operated shaft puller is on carriage.

Another new invention—Collard expandable shafts—made by Collard Mfg. Co., Camas, Wash., are being introduced at Potlatch. Pneumatic tubes inside a longitudinally segmented steel jacket can



ALASKAN COPPER STAINLESS STEEL PIPE

Above photograph shows stainless steel pipe ready for shipment to POTLATCH FORESTS, Inc. Alaskan Copper provided 10,000 feet of this pipe to the Lewiston, Idaho plant.

ALASKAN COPPER WORKS

DESIGNERS and FABRICATORS

"Since 1913"

Seattle

Wash.



SULFUR-DIOXIDE

HIGHEST
QUALITY

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FOR COMMERCIAL USE

One of the newer chemicals with hundreds of uses. Economical and convenient to use.

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For paper pulp, textiles, many food products, minerals and other materials.

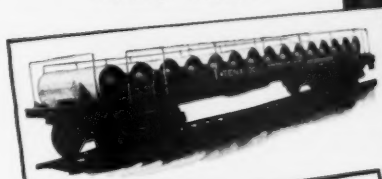
DECHLORINATING AGENT

Removes excess chlorine in paper pulp, in laundries and in textile bleaching.

CHEMICAL PROCESSING

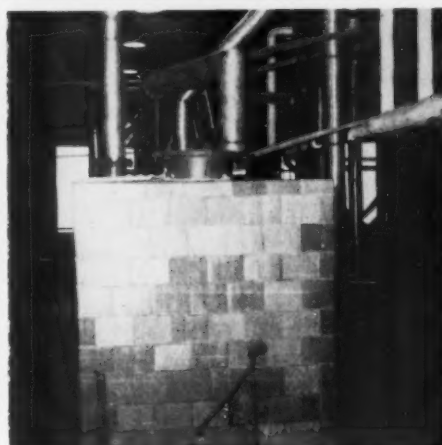
SO₂ has many uses in chemical processing such as oil refining, manufacturing of plastics and as a leather tanning agent.

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Potlatch Forests, Inc.

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Chemtile Construction

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Acid Resistant Linings

in their new modern mill at

Lewiston, Idaho

CHEMICAL LININGS, INC.

500 Trust Company Bldg.

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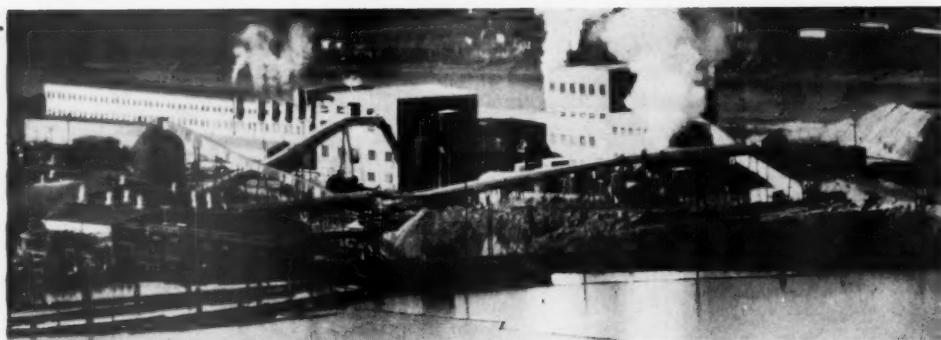
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*Congratulations on Completion of Your New Mill
in Which We Are Happy to Have Had a Part*

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Yakima, Washington

"Building A Better Northwest Since 1908"

Builders of three of the pulp and paper industry's newest and most modern plants—the Weyerhaeuser Kraft mills at Longview, Wa., and Springfield, Oregon; and the Potlatch mill at Lewiston, Idaho.

be deflated by release valve, to permit easy withdrawal of the shaft.

Finishing

Beyond the winder are the multi-roll backstand, 196-in. cutter and slitter and layboy, all supplied by the Moore & White Co. Disc blades slit the paper as it is fed through the cutter from the six backstands in line ahead of cutter to accommodate Jumbo rolls direct from the Pope-type reel, thus enabling simultaneous cutting of paper from that many rolls. It is driven by an electronically-controlled General Electric speed variator.

An unusual feat which has been made possible by the arrangement here is that a sheet over 9 pt. weight can be carried through the air from machine end right through the Moore & White cutters, distance of 157 ft. It would be threaded into the cutters by hand, as in a calender stack. The GE speed variator automatically changes speed of cutter and layboy as paper machine speed changes, so paper can be run directly from calender to cutter when desired.

A Cameron 108 in. trim rewriter for small rolls, two Harris-Seybold automatic paper trimmers, a Fairbanks-Morse shipping scale and Ross-Carrier Co. fork trucks are other presently installed equipment at the finishing end.

Heating and Ventilation

J. O. Ross Engineering Corp. supplied



FORMER SOUTHERN INDUSTRY officials who helped President Davis build the Potlatch Pulp and Paper Mill and now are his top operating team:

ROLAND WILBER (top left), Manager of Pulp and Paper Division;

JOSEPH BETTS (top right), Chief Engineer of the Division;

OTIS B. SMITH (lower left), General Superintendent of the Division, and

JAMES PETTIGREW (lower right), Chief Electrical Engineer for the Division.

the heating and ventilating system distributing air beneath the roof of the entire machine, stock preparation and finishing room. Two large sets of supply apparatus are located in a special apparatus penthouse built into the trusses on top of the roof about midway of the length of the building. All of the supply air is filtered through American Continuous Automatic Air Filters and the supply air temperature is controlled by Taylor Ratio Controllers whereby the supply air temperature is governed automatically by the outside air temperature.

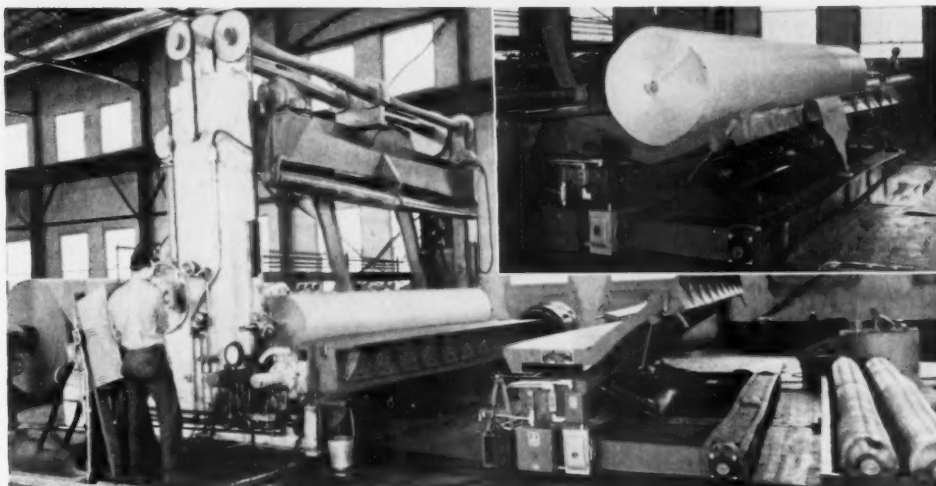
Additional make-up air is supplied through four large make-up air units in the basement, and these units also have temperature control. In this way 78,880 cfm. is supplied into the basement, and this air then rises up around the paper machine.

The hood is a standard Ross removable panel construction hood, 156 ft. long, with six 60-inch diameter axial flow exhaust fans located in back of the machine taking the air from the hood horizontally beneath the crane and discharging it up along the outside wall to a point above the roof.

Pumps and Auxiliaries

An Allis-Chalmers 15,000 gpm., 30-ft. head, 585 rpm. centrifugal type fan pump is beneath the headbox on the ground floor with a 150 hp. GE squirrel cage in-

SAFE, FAST HANDLING OF REWOUND PAPER ROLLS WITH THE AMERICAN CORELATOR



WHY WASTE VALUABLE TIME WHEN YOU CAN DO
IT THE FAST AND EASY WAY WITH AN AMERICAN
CORELATOR POSITION OF LOAD IS POSITIVE!

Take-off of slitted rewind rolls and removal of mandrel is made without delay because the Corelator supports the entire roll sections as they are lowered to the correct position both vertically and horizontally for pulling the mandrel.


Delivery to the wrapping rolls or next station is a simple push but-

tan operation and the Corelator is out of the way while setting up for the next run.

Engineers happily report that this unit provides an excellent safety feature too! After paper is started on the mandrel, the Corelator is returned to the load position and acts as a guard, keeping the operators a safe distance

away from the rewind rolls.

Here again is proof that American has the answers for difficult handling problems. Backed by years of experience in the plywood and mill equipment field our engineering staff is prepared to provide you with the right equipment for profitable Paper Mill Handling problems.



**PLYWOOD-HARDBOARD
and SAWMILL MACHINERY
DESIGNED and
MANUFACTURED**

AMERICAN MANUFACTURING COMPANY

INC.

TACOMA 2, WASHINGTON, U. S. A.

PHONE MAIN 6153
CABLE ADDRESS:
AMERCO

POTLATCH STORY (Continued)

duction motor. Here again the stainless steel piping is outstanding, with large gauge welded Alaskan Copper Works stainless leading to and from the pump.

Also on the ground floor are the battery of six Nash Engineering vacuum pumps with GE drives of 150 and 225 hp. Large ones serve the presses and couch and also the Bird Vickery felt conditioner, and small size the flat boxes. Largest are two H12A and two H11T pumps. Also on the ground floor are the seven Vickers pumps for hydraulic operation of the press rolls and oscillation of doctors; two large Worthington air compressors for controls and air needs; Bowser oiling system. Midwest-Fulton drainage and a large E. D. Jones & Sons broke beater. Here also is a Lobdell roll grinder to keep machine rolls ground for maximum efficiency.

Electrical Equipment

A strictly mechanical drive is provided for the paper machine by Rice Barton, in accordance with desires of the Potlatch engineers. It is equipped with R-B Hypoid bevel gear units consisting of 13 Hypoid gear boxes, each with a Fawick Airflex clutch between it and the driven pulley. The drives are belted down to a line shaft on the ground floor. Motor operated belt shifters control the position on cone pulley of the three-ply leather Cone-Master belting supplied by Alexander Bros. of Philadelphia. The line shaft on lower floor is driven by a GE turbine located there, and machine speeds are varied by varying turbine speed. With this mechanical drive, the turbine is started up downstairs, operating the line shaft, but clutches are thrown in individually for each section. Fawick clutches are CB constricting type.

All electrical equipment throughout the mill was supplied by General Electric. Major GE installation is in the turbine room on second floor adjoining the beater and machine room at wet end. Here is an 11,100 kw maximum capacity GE turbine generator 9-stage, 3600 rpm, unit. There is 160 lbs. uncontrolled extraction on the turbine, and exhaust at 60 lbs., with the lumber mill dry kilns' heating equipment acting as turbine condenser. Brown instruments are used in the turbine room.

Besides the GE mechanical drive turbine for the paper machine, there are others for the power house auxiliaries.

About 300 electric motors and gear motors in the new mill by GE range from 1 to 800 hp. Total rating of all GE motors in the mill is over 10,000 hp. GE supplied control center equipment including circuit breaker combination full voltage magnetic starters. A 12,000 volt metal-clad switchgear unit is installed, as well as two indoor master unit substations.

Power and Water

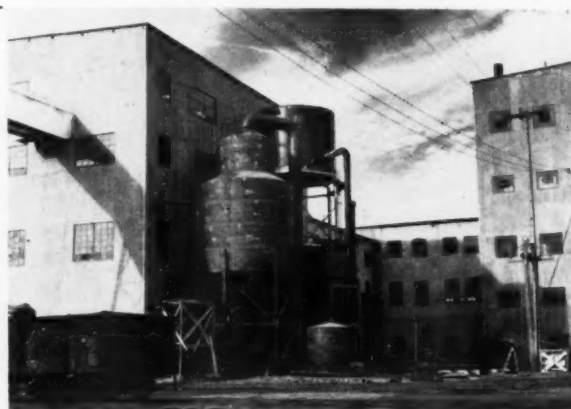
Power is distributed throughout the plant through 16 load center substations varying in size from 500 to 1500 kva., supplied by General Electric. A new type of

power boiler was supplied by Combustion Engineering-Superheater, Inc. It will produce 200,000 lbs. per hr. of steam; 600 lbs. working pressure; 750 degrees super heat. This boiler burns hogged fuel, pulverized coal and oil—any or all of these fuels. It has a C-E wood burning spreader stoker installed in the lower part of a water-cooled furnace, specially designed to handle these various fuels. The hogged wood is fed into the lower furnace above the stoker where it is partially flashed dried and burned in suspension. The balance burns on the grate. Auxiliary air jets provide turbulence and accelerate combustion above the stoker. It is believed that this unit has the largest wood burning capacity of any boiler in the industry. Coal burning equipment consists of C-E Raymond Bowl Mills which supply horizontal burners in the upper furnace. The pulverized coal that is blown

in to the furnace is so fine that 70% of it will pass through a 200 mesh screen, that is approximately equivalent to the fineness of flour.

A Cochrane Corp. hot process boiler water treatment system and separate Cochrane deaerator for feed water treatment were installed by C. C. Moore & Co. Engineers, Seattle-San Francisco. Bingham Pump Co., supplied two high pressure boiler feed pumps.

Infilco, Inc., provided a 12,500 gpm. capacity accelerator for clarifying Clearwater River water together with chemical and hydraulic control equipment. Wood stave pipe to it from the river was supplied by Federal Pipe & Tank of Seattle. Federal Pipe also laid a 42-in. wood stave asphalt impregnated and steel-band wrapped pipe to carry mill effluent below the city water plant. It is half a mile long underground and a tricky 230 ft.



ILLUSTRATED ABOVE: Blow tank; elevated hot and warm water tanks; accumulator tank at Potlatch Forests, Inc.

Hydraulic Supply Fabricated and Field Erected

Processing & Storage Tanks at Potlatch Forests, Inc.

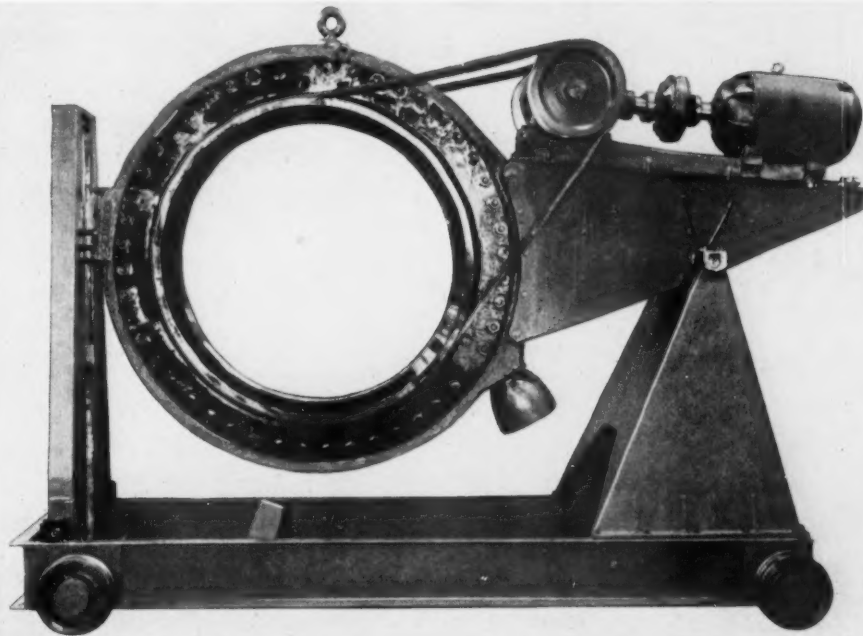
IN GENERAL, Hydraulic Supply Mfg. Company fabricated and field erected the major portion of all the mild steel tanks required in the Potlatch mill. The tanks ranged in diameter from 3 feet to 92 feet; and in height from 3 feet to 75 feet. This group of tanks included all types, such as—leg, elevated, open top, self-supporting roofs, both conical and umbrella types. The weight of steel for these tanks and miscellaneous other items totaled 2,000,000 pounds.

HYDRAULIC SUPPLY MFG. CO.

STEEL FABRICATION

7500 8th Ave. So.

SEATTLE 8, WASHINGTON



May We Solve Your Barking Problem, Too?

In the new and completely modern Pulp Mill of Potlatch Forests, Inc., at Lewiston, Idaho, we were privileged to install two hydraulic ring-type barkers.

Hansel barkers are designed for efficient performance in pulp and lumber mills in every region. Whether your logs range from 3 to 16 inches in diameter or from 10 to 74 inches, we have a barker for you.

It is possible that the Hansel barker can be used for your operation, using no more power than the total used in your present operation, while at the same time giving greater output at much lower cost.

Other advantages: Fast production, low water consumption, low maintenance and labor operating cost, simple installation.

If you wish to have data on the Hansel barker's application, to your specific situation, send us particulars of your range of diameters and production rate and we will gladly let you have an analysis.

Hansel Engineering Co., Inc.

1500 Westlake Ave. North
Seattle, Wash.

Hansel Engineering Co., Ltd.

1375 West 25th Ave.
Vancouver, B.C.

POTLATCH STORY (Continued)

was laid on the bottom of the Clearwater River. A dike was built into the stream with ways from which the pipe was dropped into 8 ft. of water and divers with concrete blocks went down to fasten it. Any miscalculation would have broken the pipe.

Recovery and Chemicals

Alongside the power boiler in the power house is the Combustion Engineering-Superheater, Inc., recovery boiler, which is designed to burn dry solids from black liquor and to produce steam at 610 lbs. pressure and 730 degrees F. Both the power boiler and the recovery boiler are approximately 70 feet high.

Going back to the beginning of recovery systems in the pulp mill, a blow steam recovery system was supplied by Swenson Evaporator Co. A new scrubbing tower has been installed. Contaminated waters from digester top relief, accumulator and evaporators are stripped in a column with hot furnace gases introduced at the bottom, thereby removing most of the sulfides and mercaptans which are sometimes toxic to fish.

Black liquor recovered from washers is collected in tanks below them and provides dilution for each stage and is used for washing pulp on the preceding washer, excess being pumped to outside storage. Here again pollution is offset by a closed system. Entrained air in black liquor is removed by an Impco foam breaker.

From the outside storage tanks, black liquor is pumped to a Swenson five-body five-effect evaporator with surface condenser. This is further concentrated in two D. J. Murray Mfg. Co. Cascade evaporators, the liquor at about 65% solids going to the adjacent combustion recovery boiler already described. Keasby and Mattison insulation and Union Asbestos insulation for mill piping and for recovery plant and boiler plant was by Asbestos Supply Co. of Spokane.

Escaping gases from combustion processes in the recovery boiler pass to a Cottrell precipitator installed by Research Corp., of New York, by which electrically charged rods collect salt cake which is returned to the makeup salt cake mixing tank. A 125 ft. high steel stub stack carries off fumes which prevailing air currents carry off up the river valley, and this coupled with usual low humidity, are expected to minimize odors.

Molten slag from the recovery unit is mixed with weak wash in a dissolving tank and the resulting green liquor is pumped to the Dorr Recausticizing System nearby the power house. Dorr tray thickeners, Dorr lime slaker and causticizers are in a compact unit, carrying through the conventional process by which green liquor is heated and mixed with new burned lime and the subsequent white liquor is pumped to storage and thus goes back to digester for re-use. An Oliver United 6x4 ft. lime mud filter washes and dewater lime mud from the

Dorroco system, thus preparing it for the adjacent Allis-Chalmers 140 ft. long, 8 ft. diameter lime kiln. The kiln has a chain section for more efficient contact of gases with sludge in the kiln. E. J. Bartells & Co. supplied refractories on the kiln.

As time goes on other processes or additional units may be added, but this is the way in which the first Rocky Mountain states mill was laid out at its start-up.

SPENDS \$14,000,000 IN 3 YRS.

Rayonier Continues Improvement

Rayonier, Inc., with three mills in Washington and one in Florida, spent \$2,858,590 on plants and equipment in 1950 for increased efficiency, production and quality. In 1949, \$4,172,532 was thus expended. Also in 1950, \$1,065,474 was spent for timber, timberlands and logging facilities.

Construction is now under way on a mill improvement program estimated at \$6,000,000, under which capacity would be increased about 10%, or 45,000 tons annually. Possibilities for further ex-

Ohio TAPPI Meets April 10 at Middletown

The April meeting of the Ohio Section of TAPPI will be held at the Hotel Manchester in Middletown, Tuesday, April 10. Dinner will be at 6:45 p.m. and the speaker will be George Welp of International Printing Co.

Mr. Welp has a background of broad experience in publishing.

pansion are being studied by a special group of company personnel.

High price and scarcity of natural fibers for textiles and tire cords is expected to increase demand for Rayonier's purified wood cellulose.

William R. Reed, of Seattle, Wash., president of Simpson Logging Co., large stockholder in Rayonier, is serving as executive vice president until a president can be secured. Selection of a president is under study by a special committee of the board.

WASHINGTON NEWS

Even though the machinery makers welcome war contracts as patriotic duty, very few war orders, comparatively, have been received. But because most machinery men also feel their first duty is to the pulp and paper field which built their business, and strongly believe the pulp and papermaking industries belong in a vital mobilization classification, they hope the Administration will soon make known in a clearer way what is expected of them.

Some of the more important pulp and paper machine firms are in machine tools; there considerable advance notice is required for changes to be under way on new products. What happens in the machine tool department affects some of the leading machine makers for this industry.

While, as reported in the foregoing, nearly 500 million dollars in applications for certificates of necessity were reported to be in Washington in early February, that rumored figure did not indicate any abnormal "foul-up" in NPA, nor was it a fair index to immediate future expansion. In actuality, PULP & PAPER found on good authority, that a competent staff would soon be processing such applications into classifications which might be termed "feasible and necessary" or "questionable for now." So despite the usual stories rampant about "organized confusion" in Washington, more orderly thinking concluded that many of the known projects now programmed would soon be resumed.

Also, the appointment of a pulp and paper industry division head in NPA—he is Gabriel J. Ticoulat, well known vice president of Crown Zellerbach from San Francisco—to work with, and ranking over, Commerce representative Le-

Roy Neubrech, was certain to hasten solution of the machinery priorities problem. The new head of the machinery division will operate under Mr. Ticoulat and a candidate approved by him is reported to be near his appointment. He is an experienced machinery man approved also by the as yet informally organized machinery group which has been more or less acting, also informally, as a machinery industry advisory committee.

Those with experience in Washington, however, noted that in general the "un-freezing" of certificates of necessity applications was a problem separate from the work of the machinery group. The certificate applications involved big new projects and additions, some announced and others still secret, rather than single equipment installation projects. As such it is certain that such applications as survive initial examination will be handled on high levels with the benefit of experienced advice as to the supply and need of product involved.

Majority of equipment and supply men felt that in reality the situation on paper-making facilities was easier than in the pulp equipment category, a natural corollary to industry thinking that while the pulp shortage is unquestionably real, there may be hidden soft spots in the paper tightness due to factors familiar to all readers.

There was no visible evidence that anxiety to postpone allocation of pulp, accounted for any failures of specific mills to actively assist machinery and supply men to obtain priorities for materials to make ordered equipment.

In early March, metals supply for repair and maintenance got some relief from Order DO-97.

for high
efficiency
in
bleaching

• • • You get whiter, better pulps and papers with BECCO bleaching processes.

BECCO processes have been developed to make the most efficient use of the bleaching qualities of BECCO Hydrogen Peroxide. BECCO Hydrogen Peroxide 50% is a safe, mild, fully effective bleaching agent.

Years of research, years of successful field experience with users of BECCO processes and BECCO Peroxygen chemicals . . . laboratory and pilot plant facilities at our plant in Buffalo . . . make BECCO a leader in the field of pulp bleaching.

Important to you . . . the active cooperation of BECCO representatives . . . specialists in pulp bleaching processes. Let us know if they can be of help.

**GROUNDWOODS
SULFITES
SEMI-CHEMICALS
KRAFTS (SUPER BLEACHING)
AGRICULTURAL RESIDUES**

use **BECCO**
bleaching
processes

Among users of BECCO Peroxygen Chemicals and BECCO bleaching processes are: St. Regis Paper Co., Escanaba Paper Co., Diamond Match Co., Blandin Paper Co., Finch, Pruyn & Co., Inc., Westminster Paper Co., Ltd.

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BECCO SALES CORPORATION, Buffalo 7, N. Y.

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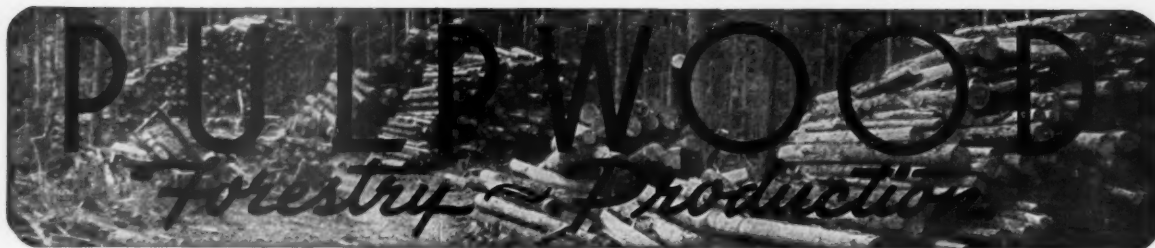
- (P-2).....BECCO COLD STEEP BLEACHING PROCESS
- (P-1).....Pulp Bleaching with Hydrogen Peroxide
- (P-3).....Peroxide De-inking
- (P-4).....Glassine Bleaching
- (P-5).....BECCO Laboratory Bleaching Methods

Name..... Title.....

Company.....

Address.....

City..... Zone..... State..... PP-4-51



All across the North American continent, north to south and east to west, the industry is improving woodlands technics and introducing large scale conservation, reforestation and mechanization.

AMERICAN PULPWOOD MEETING



AT AMERICAN PULPWOOD ASSOCIATION sessions in Waldorf-Astoria in New York during Paper Week:
Top (l to r): E. T. GAYNOR, Brunswick Paper; T. W. EARLE, Robt. Gair Woodlands; PAUL KOENIG, Glatfelter;
GOVERNOR SHERMAN ADAMS.

Middle group (l to r): TOM BUSCH, International Paper, Mobile; F. E. PEARSON, Eastern Pulp Wood; J. E. McCaffrey, International Paper, Georgetown.

Below (l to r): M. C. GIBSON, Canal Wood; C. A. GILLET, Forest Products Industries, Inc.; H. J. MALSBERGER, Southern Pulpwood Conservation Assn.; FRANK HEYWARD, Gaylord Container, and H. R. PALMQUIST, Marathon Corp.

As indicated in a quotation from Tom Busch, procurement chief of International Paper's vast Southern woodlands operation, the feature of the American Pulpwood meetings, in New York during Paper Week, aside from preparations for mobilization's expected peak production, was the part taken by management. Indeed, a featured speaker was Board chairman of one of the most notable companies, D. C. Everest of Rothschild, Wis.

In a way it was an answer to Mr. Busch and a commendation of the latter's stand. For Mr. Everest showed his own awareness of "Pulpwood's Role in Mobilization" and in his talk under that title said: "No industry or other functional institu-

tion, including government, can be in business a single day without products of the paper industry—there's no economic substitute" and went on to emphasize that the raw material thereof was

one of the most critical items in North American resources. The need, he expressed, was cooperative action between government agencies and industry. He directed his remarks directly to such agencies as were personally represented at the pulpwood sessions: NPA, ECA, U.S. Employment Service, U.S. Forest Service, and U.S. Selective Service.

Mr. Everest believed that 1951 pulpwood demand would require as much as 30 to 40% increase in manpower over 1951. Where was it coming from? That, in essence, was the essence of the meetings so ably arranged by H. E. Brinckerhoff, executive secretary of APA. The question was not completely answered, and may never be; but long steps were taken at Paper Week. The government men (C. N. Granger of Forest Service; Col. R. J. Bassidy of Selective Service; J. G. Laferty of Employment; Alfred Fivaz, NPA; and ECA pulp and paper chief Joseph Atchison) stood up to some sharp questioning and suggestions and tried to meet the issues frankly.

Their anxiety to cooperate was evident in the open meetings. More pointedly, it was evident in brief talks PULP & PAPER had with several Washington men after the meeting. Their problems are many; a big one is that the mobilization program is still in process. One agency chief had changed his speech drastically at nine p.m. the night before, due to new directives; and he expected further changes that were in the immediate future but could not be officially announced or crystallized at Paper Week.

Members evinced considerable interest in Joe Atchison's explanation of ECA loans affecting pulpwood, and were not surprised when Walter J. Damtoft, newly appointed deputy director to the Chief of Forest Products Division of Economic Stabilization, clearly related the relationship between his new job on leave from Champion at Canton, and his member associates in the pulpwood group. He showed that he was going to enter government with all his experience working, and a keen understanding of the problem.

On the panel of the timely government organization meeting were in addition to the government men mentioned, and Mr. Everest, the following: G. L. Snowden,

(Continued on Page 90)



Good Work for a 5 year old

How an International TD-14 put in five profitable years of rugged duty, dozing roads and arching out hemlock for pulp.

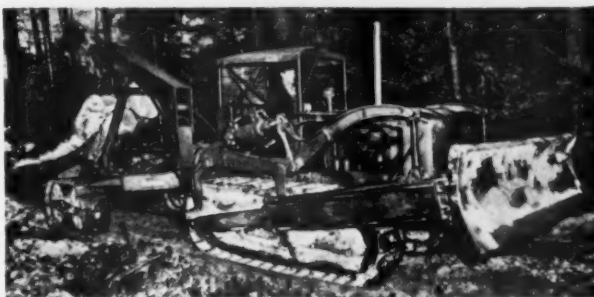
Getting out an average of 15,000 board feet per day in the swampy going of Michigan's Upper Peninsula is a rough assignment.

But an International TD-14 has been doing it for five years, even on the coldest winter days.

Listen to what R. G. LaBelle says of this TD-14: "This tractor has had only one overhaul during five years of very hard work in this swamp region, where it cuts the access roads and arches out the timber."

See your International Industrial Distributor for the full story on hundreds of Internationals with equally good job records. Find out, too, what he offers you in service. His expert servicemen are kept up to date in the latest techniques by International's mobile training units. His large parts stocks are backed by an International parts depot within easy shipping distance. Call him. He's in business to help you with "power that pays."

**INTERNATIONAL HARVESTER COMPANY
CHICAGO 1, ILLINOIS**



15,000 BOARD FEET A DAY. Veteran TD-14 pulls logs to loading point for trip to pulp mill in the swampy going near Negaunee, Michigan.

INTERNATIONAL



POWER THAT PAYS

HOW SOUTHERN KRAFT DOES IT

A Visit to Georgia and Florida Operations

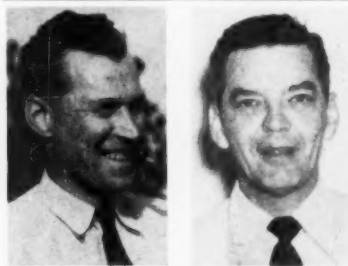
Part II

On the shoreline of St. Andrews Bay, at Panama City, Fla., Southern Kraft Division of International Paper Co. completed in 1931 the first paper mill for exclusive mass production of Fourdrinier kraft container board. Test runs for this product had been made at the Bastrop, La., mill in 1928, with production of 6200 tons in 1929. The new mill contributed its full share to the Division's production of 133,900 tons of this product in 1932.

The payroll was welcome in Panama City, but the paper mill provided an even greater economic relief from stalemate in the rural scene. The sawmills had gone through, harvesting the virgin forest, and the naval stores operators both accompanying and following the saw had extracted gum from both primary and second growth trees. Since the extraction of gum in the naval stores operation slows tree growth as much as 50% the vast area of West Florida had gradually filled with stagnated forest stands, as a whole not large enough for profitable sawmilling but worked out for turpentine. The mill broke this stalemate, presenting a market for harvesting the exhausted tree crop and opening the way economically to revival of the forest. The characteristic scrubby palmetto, sandy soil, remote from major consuming markets, has but one predominant economic utilization—growing trees.

An understanding by mill management of its own function in the economic revival of the area has by example paved the way to adoption of good forest practice in the heavy pulpwood sections, due in a large measure to the comeback of the woodlands. This example provided by nature has inspired an educational program that has pushed to results. A good many pulpwood dealers have become owners of forest land.

Of nearly 229,000 acres of forest land in the Panama City woodlands division, 183,000 acres has attained the status of "tree farm" and all of it is in Florida. The



P. W. CHESTNOLOVICK (left) Division Forester in charge, Panama City Division, Southern Kraft (I. P.) Woodlands, and LLOYD D. HALL (right), Wood Procurement Superintendent, Panama City, Fla.



AT SOUTHERN KRAFT DIVISION in Panama City (l. to r.): J. V. W. FALCK, I. P. Logging Engineer; H. H. LAYNE and W. S. MCCALL, Producers.

division has its headquarters near the mill, functioning under the direction of P. W. Chestnolovick.

The division, as a whole, is principally coastal type flatwoods, interspersed with ponds having some cypress, but averaging mostly 65% slash and the balance, longleaf pine. Perhaps of the total woodlands, five or six per cent may be in the rolling uplands.

Panama City Area Organization

The organizational effort is keyed to fire control, an essential area factor in the effort to make every acre produce its full quota of wood of some kind. A vigorous public relations program is primarily based on contact with local residents. The forest fire control program is backed with look-out towers, telephone communication, and 2-way radio. The program is linked closely with the state, and has been established county-wide within the past few years. The radio facility was recently switched from straight AM to the FM two-way installation, with Motorola receiving-sending sets going into company vehicles.

Mechanical headquarters for Panama City district is centered at Smith's (fire) tower, south of Clarksville, itself 26 miles north and 16 miles east of the mill. Here a good shop is maintained, with experienced mechanics. Equipment in the district includes: Two Caterpillar D-4 tractors; one International TD-6 crawler tractor; two Mathis fire suppression plows; one International wheel type tractor; one Evans-Busch (Sumter) trailer and one Dorsey transport trailer for fire control equipment; one Dodge power wagon with 300 gallon water tank; one Willys jeep with small plow; one Chevrolet pick-up truck with 250 gallon water tank; one Chevrolet pulpwood truck; two Army surplus 6x6 transport trucks; one short-base Studebaker truck; and two Athens fire-break plows, a tandem and one 6-disc Series C. All automotive equipment, including a district forester's car, have two-way radios.

In this district there are between 110 and 120 miles of company roads. To build and maintain them the district has a Caterpillar pull type grader; one Galion road patrol; a 3½ cubic yard Bucyrus Erie dirt pan (scraper). The roads, in general, were inherited from the CCC days but something over 6 miles were built to the close of 1949. In maintenance, the roads are gone over twice annually with a motor patrol.

The first holdings of timberlands were acquired in 1931. About six or seven thousand acres have been planted to pine seedlings, starting in the CCC days. Natural reproduction is slow, particularly in longleaf pine.

Lloyd D. Hall, division superintendent of wood procurement, has about 30 dealers taking care of the mill's pulpwood needs. Of this, 85% moves by rail, half of

SOUTHERN KRAFT'S STORY — TOLD HERE FOR FIRST TIME

Here is the second of series of unusual articles prepared exclusively for PULP & PAPER readers, describing the forest production policies and methods of International Paper Co., Southern Kraft Division.

This marks the first time that the important story has been told of how this largest paper company on the continent, and dominant producer in the South, is supplying its nine big kraft mills from Springhill, La., and Camden, Ark., to Georgetown, S.C., with 3,500,000 cords of wood annually. Also, of how it manages 2,500,000 acres of fee ownership lands.

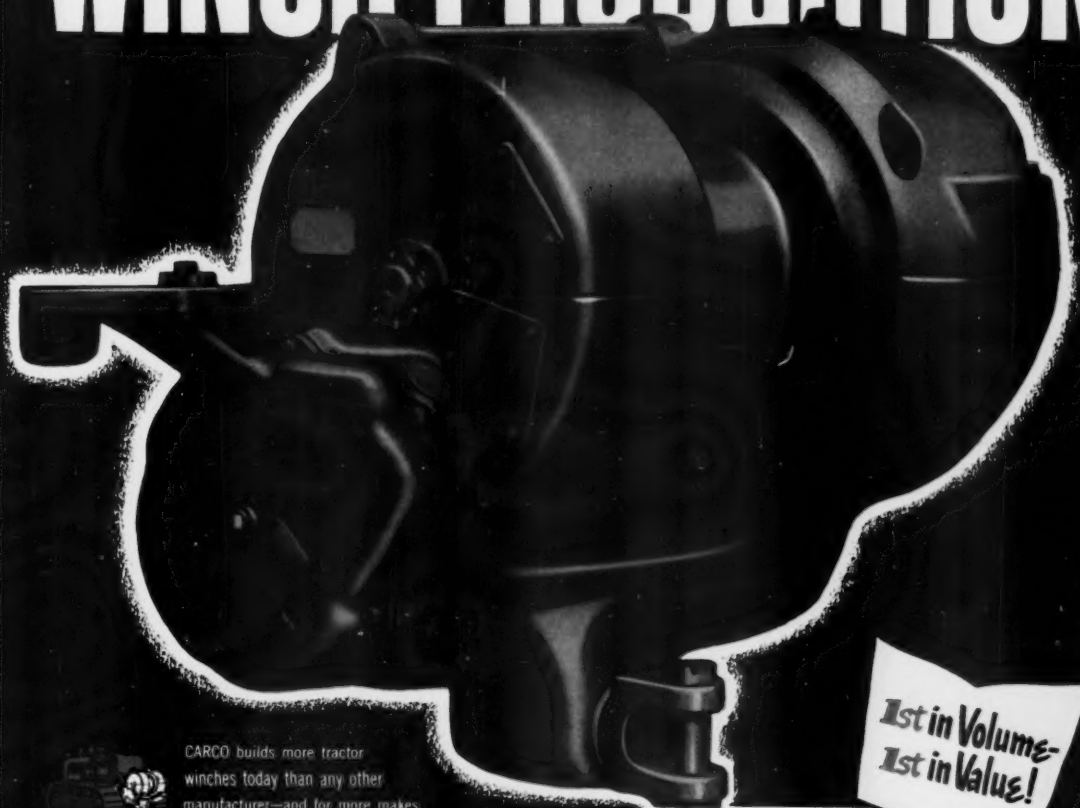
PULP & PAPER's Southern associate editor toured the company's woods camps in a zigzagging course over several thousands of miles of the South to gather this material.

The Southern Kraft Division management faced a challenge of mammoth proportions in supplying the wood for its mills on a sustained yield basis. The manner in which this challenge was met makes an interesting story.

The story as it unfolds, dramatizes the vital importance of modern equipment in planting and harvesting the timber crop, the vital roles of the men who work and profit from this seed-to-pulp and paper cycle, and the policies of a far-seeing management in working harmoniously with hundreds of neighbors in the South in a vast economic project.

Part I, in our March issue, dealt with the overall picture and with the story in the area of Georgetown, serving the world's largest pulp and paper mill.

CARCO-FIRST IN WINCH PRODUCTION



CARCO builds more tractor winches today than any other manufacturer—and for more makes

of tractors. That means more practical

experience, more efficient production, more usefulness built into every Carco winch. Carco engineering took the lead years ago with anti-friction bearings, oil bath lubrication and cast cases; now first with cable controls, years ahead in accessibility for servicing. Carco is first in number of dealers, too—information, parts and service are everywhere as close as your nearest tractor dealer. You expect the most value from the volume leader, and you get it from Carco, first in production of tractor winches. Pacific Car and Foundry Company, factory, Renton, Wash.; warehouse, Portland, Ore.; eastern sales and warehouse, Franklin Park, Ill.

*1st in Volume—
1st in Value!*

CARCO

Winches for all makes of tractors



HERE ARE TWO PICTURES SHOWING WHERE AND HOW INTERNATIONAL PAPER CO. manufactures its own concrete culverts for woodlands roads right in the woods. In every nook and cranny of Southern Kraft Division's woodland there is constant effort to make dollars stretch over the big tasks, a favorite method being production of concrete culverts for access roads. Lubricated forms are used for mixing to prevent sticking. Virtually every district has some form of culvert casting going on. Here are scenes in the Panama City district where a simple outlay produced 500 pieces of 12-inch to 24-inch diameter pipe in 1948, at one-third what outside purchase would have cost. Also produced: Precast bridge piers and house foundation blocks. Another favorite, boundary markers.

it in labor saving open rack cars. The remaining 15% moves by truck; none by water. Only a small percentage of procurement needs comes from company holdings. The bulk of shipments originate from small holdings not exceeding 500 acres. Of land ownership in the area generally, 70% runs to tracts not exceeding 1000 acres.

The typical producer of pulpwood has a 2-wheel saw, a 2-ton truck with 2-speed rear axle, and a sufficient supply of labor. The small land ownerships make it difficult to mechanize pulpwood handling.

Not all of the Panama City mill pulpwood producers are small. One who operates on a substantial scale with mechanical aid is Sylvester McCall, whose dealer is W. H. Laird. McCall has a work force that runs several Kut-Kwick wheeled pulpwood saws and three trucks that have been equipped to load pallets. The 12 pallets come from Tidewater Equipment Co. (Brunswick, Ga.) and are spotted, drawn through the woods with a Caterpillar D-2 tractor. Savings resulting from this organization are substantial. The Cat bunches the pallets for the trucks, which load with their own winches. Loading of the pallets with pulpwood eliminates double handling. The trucks saving on tires by not running around in the woods; loading out in an average seven minutes, as against 20 minutes. It takes one truck less (saving a truck driver pay) to handle the pulpwood. On long hauls, McCall gets permission to haul 6-foot pulpwood, increasing the pay load from three cords to three units. McCall also does seedling planting on the side. He has planted for Laird, and also for Leon Durham, of Waller-Durham Co., Blountstown, Fla., another dealer.

The mill gives trucks a close turn-



around on arrival at the yard, unloading being effected with cranes. Equipment on hand includes a new American diesel locomotive crane, two Link-Belt Speeder cranes, a war-time shipyard gantry crane, and two older cranes.

The Waycross, Ga., Division

In southeast Georgia, running down toward Okefenokee Swamp, Southern Kraft has a 199,000-acre woodlands division with headquarters at Waycross, under direction of Oscar G. Traczewitz. The division was not set up until September, 1948, the area having been divided previously between Georgetown and Panama City mills. One of the first clerical tasks was to amalgamate record on taxes, equipment, depletion (cutting) of stands, and mapping. These lands are held under the title of Southern Kraft Timberland Corp., a Georgia corporation, because Georgia law prohibits an out-of-state corporation holding in excess of 5,000 acres within the state. None of this company land ownership runs over six or seven years back. The division is set up in four districts.

Except for two districts, the division as a whole runs to small ownership areas due to long occupancy and division of lands by inheritance. A tract of a few hundred acres here is big, a condition similar to the Piedmonts. This is naval

stores territory with practically all long leaf and slash pine in the three lower districts, and loblolly-shortleaf pine in Madison District. Pine Harbor District is well blocked out with lands acquired from Pine Harbor Co.

For fire control, the upper area could be reached by public roads. Each district was outfitted with a big truck and trailer for hauling the tractor and fire suppression plow, as also with a light truck with spray pump and water tank to "get there quick." Immediate construction in Hazlehurst District yielded 75 miles of access roads; in Okefenokee, 45 miles; in Pine Harbor, 14 miles. In addition to new road building, the districts performed a lot of maintenance work.

Equipment used at Hazlehurst embracing both fire suppression and road building includes an International 2-ton truck with Evans Mfg. Co. "Sumter" trailer; an International TD-9 tractor and Mathis plow; a Chevrolet 4x4 with spray pump and water tank; a Dodge power wagon equipped with radio, water tank and pump; and a Caterpillar road grader. Pine Harbor equipment includes: A small Oliver tractor and Lowther seed planter; an International 2-ton truck with Sumter trailer; an International TD-9 tractor and fire suppression plow; a Chevrolet pick-



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FLORIDA AND GEORGIA WOODLANDS SCENES—International Paper Co. methods:
1—A 1½ cord pallet furnished by Tidewater Equipment Co., Brunswick, Ga., is being winched aboard a Studebaker 1½ ton truck at Sylvester McCall show on East Bay, Fla. Two pallets make a truck load. Vehicle is loaded and gone in seven minutes, a reduction from 20 min. by old technique.
2—Dodge Power Wagon with Goodyear tires, equipped for fire-fighting in Okefenokee District in Georgia. Water tank is built in bottom of truck body. Has 2-way radio.

3—Typical Southern Kraft Division sandy woods road in 40-year longleaf and slash pine near Homerville, Ga. Road is 24 ft. wide.
4—International TD-14 Tractor and two-wheel 3½ yard Bucyrus-Erie dirt pan mover for road-building near Homerville.
5—Oliver HG-42 Tractor drawing seedling planter in Panama City Division.
6—Seedlings for planting are kept damped down between rows of 11-year old slash pine near Panama City, Fla.

up truck with 2-way Motorola radio, pump and water tank; a Chevrolet 4x4 2-way Motorola equipped radio with tank and pump; and a Caterpillar road grader. The district has a farm disc; plows fire break lines one year and discs the next, obviating trenching from continuous plowing of the line.

Madison district has an Oliver Cletrac crawler tractor, Lowther seedling planter, and a jeep equipped with tank and hydraulic lift fire plow.

Turpentine and Honey in Area

Embracing the largest area, the Okefenokee district presents the most interesting aspects rising from divergences from standard forest management elsewhere. Here 83,000 acres are split up among several bee keepers who pay 1¢ per acre per year for exclusive privileges. The bees range up to a mile from the hives, gathering honey from mulberry trees, tupelo gum trees, galberry bushes, etc. Each operator has several "yards" of from 50 to 100 hives each, and each hive producing about 100 pounds of honey annually. Each operator has from 8000 to 15,000 acres under bee privilege lease. The bee keepers oppose woods burning; and those yards nearest Okefenokee Swamp are equipped with electric fences to protect them from bears.

The district also continues turpentine operations under lease. The area has a lot of old turpentine "faced" trees that run about nine inches in diameter. The previous turpentine operators worked as many as four faces on the trees, which had the effect of slowing down growth more than 50 percent. In modern turpentine, acid is used with chipping. Operators are required to use a double headed nail; and to remove all metal embedded in the tree after gum extraction is completed.

Another source of revenue to the Okefenokee district is the sale of dead or down cypress or pine trees for conversion into fence posts.



AT WAYCROSS, GA., DIVISION (l. to r.): O. G. TRACZEWITZ, Division Forester, and W. D. YOUNG, District Forester.



AT GEORGIA OPERATIONS: J. J. TUCKER (left), Procurement Supervisor at Albany, Ga., and J. R. BATEMAN (right), a Producer.

This district has a tough problem in the matter of access. The sand becomes extra dry, and sometimes hub deep on motor vehicles, and can halt pulpwood operations. In other areas lack of drainage is a serious obstacle to overcome. Its program is for primary roads every two or three miles apart, with 26 or 28 foot crowns, permitting easy passage for two loaded trucks. In five years it is planned to build 70 miles of primary road.

Equipment for the Okefenokee district is kept at Spooner, an old turpentine camp, 14 miles out of Homerville. The old-time one-room turpentine camp cabins have been brought together on good foundations, etc., to provide more ade-

quate housing for the more stabilized woodlands program. The equipment includes: an International TD-9 tractor equipped with bulldozer; an International TD-14 tractor with 3½ yd. Bucyrus Erie dirt pan; a Studebaker 6x6 army surplus truck; a Caterpillar Motor patrol; an Austin-Western grader; a Motorola radio equipped jeep with water tank and spray pump, and a tank-trailer; a Motor equipped Dodge truck with tank and pump; and a radio equipped Chevrolet pick-up truck.

Second Field Man in South

American Forest Products Industries, Inc., 1319 - 18th St., N.W., Washington, D.C., has added a second field manager to its Southern staff. He is Edward L. De Motte, Montgomery, Ala., newspaperman and magazine publisher. Announcing the appointment, Charles A. Gillett, managing director of AFPI, said: "Today the South produces about 40% of the nation's lumber and nearly half of its wood pulp."

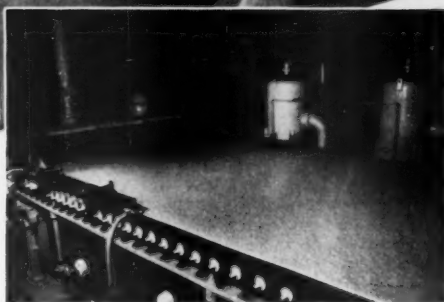
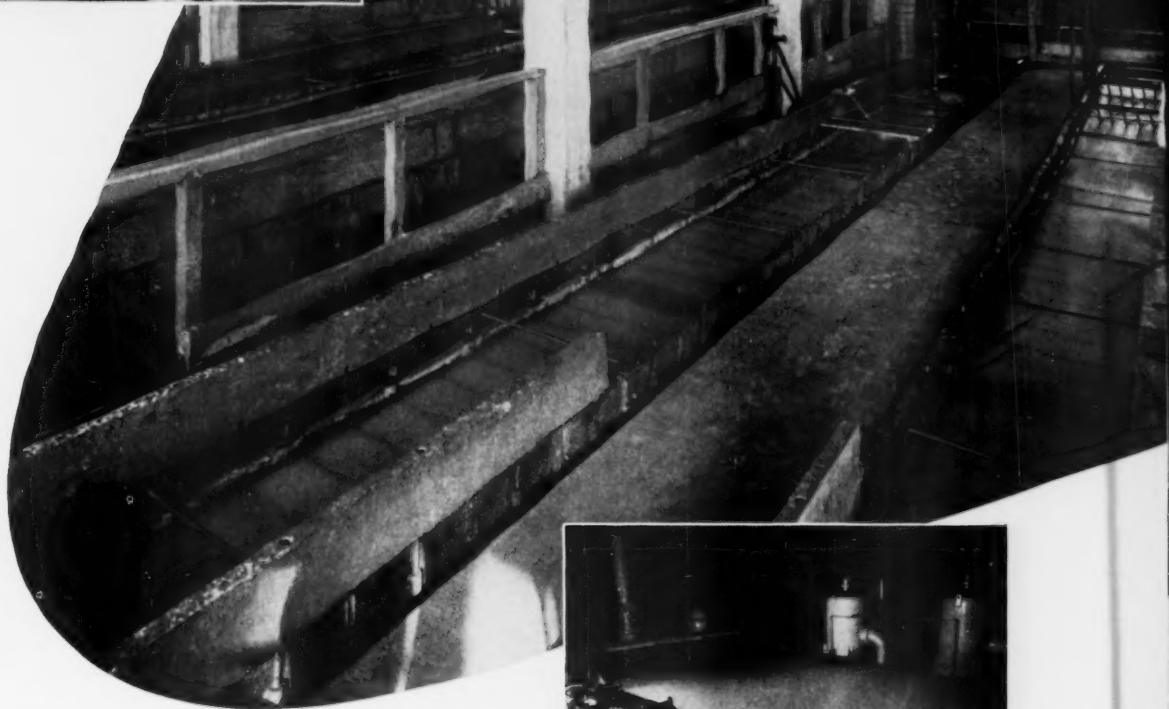
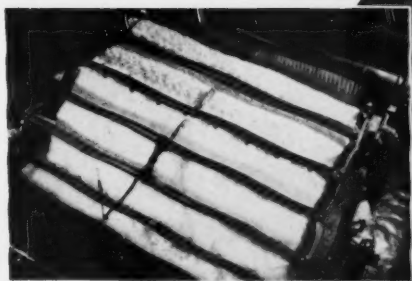
The South had comprised a single AFPI district, headquarters, New Orleans, under District Manager C. Edward Stout. Mr. De Motte's appointment made it possible to divide the South into two eight-state districts.

Mr. De Motte is at 1033 National Bank of Commerce Building, New Orleans. Mr. Stout will open an office in Atlanta.

Forest Service Man Joins FAO of UN

Dr. Irvine T. Haig, director of the Southeastern Forest Experiment Station in Asheville, N. C., left the U. S. Forest Service March 19 to join the Food and Agriculture Organization of the United Nations with headquarters in Rome. Dr. Haig will be in charge of research and technology for the Division of Forestry and Forest Products of FAO.

He is succeeded at the Asheville Station by Elwood L. Demmon, former director of the Lake States Forest Experiment Station in St. Paul, Minn.



Puget Pulp goes through a number of screening and purifying processes before it reaches the driers—great, 400 ton machines that receive the almost liquid pulp, drain it on Fourdrinier wire screens, pre-heat it, then pass it over many rolls in the enclosed drying section. The pulp comes out in dry sheets, after a trip of a third of a mile.

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SOUTH'S CONSERVATION PROGRAM

Bankers Join in Good Forestry Campaign



J. H. KEENER (left), Champion Paper & Fibre Co., Canton, N.C., newly elected President of the Southern Pulpwood Conservation Association, and R. W. WORTHAM, JR., (right), Southland Paper Mills, Lufkin, Tex., who ended his term as President and carries on as Director-at-Large.

Manpower shortages and obligations of an emergency nature rising from the current mobilization economy must not be permitted to interfere with the Southern industry's conservation efforts, declared R. W. Wortham, Jr., executive vice president, Southland Paper Mills, Lufkin, Texas, in opening of the 1951 meeting in Atlanta, Ga., recently, of the Southern Pulpwood Conservation Association. Mr. Wortham, as president of the organization, stressed the need of its forest program, asserting that "except for the mess we are in at home and abroad, 1951 would undoubtedly see the greatest expansion ever of the Southern industry."

Emphasis of the 1950 program on bringing the smaller landowners (50 to 500 acres) into the good woods practice co-operative movement was fruitful. But much is still to be accomplished in a continuing program, according to the association head. He urged continued pressure along those lines by the mills, but asked if there has not developed too great a complacency over fire and insect losses. He stressed the need to make professional and business men realize that any woods fire destroys opportunity and economic future.

Progress evidenced along these lines, he said, is reflected by increasing interest among bankers. For the mills, more constructive interest should be shown in the programs of the state forest services. They should ask: "Is the state program adequately financed? Are modern methods and equipment being effectively used? Are industrial man-power and other fire-fighting facilities effectively integrated with those of state and other protection agencies? And, finally, "Is my company doing all that is reasonable, having in mind the values involved?"

The program against insect and infestation of timber should be supported, said Mr. Wortham.

Malsberger's Report

Henry Malsberger's report as general



ARTHUR G. WAKEMAN (left), Executive Vice President, Coosa River Newsprint Mills, Coosa Pines, Ala., being introduced as new Vice President of the Association by HENRY MALSBERGER (center), permanent Forester-General Manager, and J. E. McCaffrey (right), Southern Kraft's Georgetown Area chief, who was Toastmaster.



manager-forester for the association rounded up the year's work into some interesting figures, distributions of literature, other educational activities, and notably, the number of actual cutters of pulpwood brought to see actual application of good forest practice. The management program brought demonstrational advice to 1,650 owners and actual spotting for tree cutting was done for 2,830 owners. It is believed ownership here totaled 800,000 acres, and represented only one-half of the total task performed by the association and its mill members. Marking

before cutting is on the increase, with about 61 1/2% of members' pulpwood requirements coming from non-company lands spotted for owners. The work was done by 29 conservation foresters and 60 timber spotters employed by members and pulpwood suppliers shipping to mills. This force is steadily expanding. It is estimated that 62% of pulpwood requirements of association member mills come from sled-tree or partial cutting of stands.

The association now has 25 consuming members with 35 cooperating mills. Producer members total 116, or 54 more than at the close of the previous year.

Bankers Report Activities

A significant part of the association's program was contributed by representatives of the banking field, their participation in the discussions lending emphasis to the extent to which the importance of good forestry has been accepted. Speakers

AT ATLANTA (l. to r.): GAYTON DeLOACH, recently made Georgia State Forester; G. C. SHOFTAW, Union Bag & Paper; FRANCIS J. COOK, Salisbury, N. C., who left the association to become pulpwood dealer; F. C. CONNOR, Rayonier, Fernandina, and JAS. A. MAY, Macon Kraft Corp.



AT ATLANTA (l. to r.): J. P. LATTEY, Vice President, Riegel Paper Corp. (Riegel Carolina Corp.), now building new kraft mill at Acme, N. C.; EARL PORTER, top man in I. P. Southern Kraft Division's Woodlands Div., Mobile, Ala.; MIKE STALMUKE, Southern Kraft of I. P., Moss Point, Miss.; JAMES H. GRAHAM, West Va., Pulp & Paper, Charleston, S. C., and ED STOUT, American Forest Products Industries Inc., Atlanta.



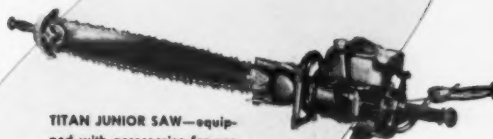
TITAN

BLUESTREAK

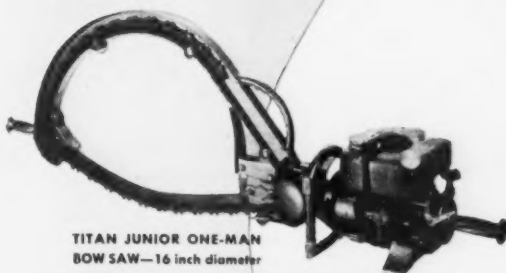
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TITAN JUNIOR ONE-MAN SAW—complete bar swivel, automatic clutch—5 H. P.



TITAN JUNIOR SAW—equipped with accessories for use by two men.



TITAN JUNIOR ONE-MAN BOW SAW—16 inch diameter capacity.

The complete TITAN line includes:

CHAIN SAWS—one and two-man—falling, bucking and bow attachments.

CHAINS—five types for every cutting need and every kind of wood.

BARs—five types, ranging in length from 2 to 12 feet on the two-man saw, including a thin bar, and from 18 to 44 inches on the one-man saw.

ALL CHAIN SAW ATTACHMENTS, accessories and parts.

The outstanding TITAN features include:

LIGHT WEIGHT—more power per pound.

NO VIBRATION—plenty of smooth power to carry the load.

LONG LIFE—vital parts are protected.

EVENLY BALANCED—easily handled and carried in the woods.

TEST RUN—all engines are fully tested and run under maximum load.

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AT ATLANTA (l. to r.): W. J. DAMTOFT, Asst. Secy.-Treas. of Champion; M. H. COLLETT, Vice Pres., West Virginia P & P; TED EARLE, Vice Pres., Southern Paperboard; JESSE ARMSTRONG, Union Bag & Paper; A. G. CURTIS, Gaylord Container Corp.



ATLANTA MEETING GROUPS: Top (l. to r.): Robert Mosely, Forestry Equipment Co., Macon, Ga.; Charles Hale, of Turnell & Morgan, Dublin, Ga.; Ben Harley International Paper Co., Elizabethtown, N. C.; and "Swede" Roller, International Paper Co., Panama City, Fla. BELOW (l. to r.): W. A. Travis, Laurel, Miss.; Tom Harris, Laurel, Miss.; C. A. Belniak, Waycross, Ga.; Ralph Taylor, Lake City, Fla.; George Mosely, Forest Equipment Co., Jacksonville, Fla.; W. R. Cullen, Dublin, Ga.



AT ATLANTA—Top row (l. to r.): B. T. GRIFFITH, International Paper, Georgetown; KEN TROWBRIDGE, North Carolina Pulp, Plymouth, N. C.; JAMES CRUIKSHANK, Southeastern Forest Experiment Station, Asheville, N. C.; T. H. HERRINGTON, Piedmont Wood Yard, Sanford, N. C.; C. B. CURRY, also Piedmont; WILLIAM MOORADIAN, Hopeville, Ga., dealers.

LOWER ROW (l. to r.): ROGER WOLCOTT, International, Georgetown; JOSEPH ALFRED, Columbia, S. C.; RAY MCKELA, Bishopville, S. C.; CARL A. BROWN, Camden, S. C.; VANCE MILES, Gulf States Paper Corp., Tuscaloosa; and LUDU E. KING, Champion Paper & Fibre Co., Huntsville, Tex.

included G. G. Ware, chairman of the American Bankers' Association forestry committee; T. M. Baker, assistant to the president of Federal Land Bank at Columbia, S.C.; and Erle Cocke, president, Fulton National Bank of Atlanta, Ga. Mr. Cocke presented a graphic outline of the bankers' tree program in Georgia. Mr. Ware said his association is studying the

credit restriction imposed by Regulation 2140 of the comptroller of currency with a view to obtaining modification.

E. W. Tinker, executive secretary, American Pulp & Paper Association, quoted figures showing the importance of the industry to economic life of the South. W. J. Damtoft, assistant secretary-treasurer of Champion Paper & Fibre Co., whose

headquarters are at Canton, N.C., a student of Dr. Schenck and a forester for 40 years, reviewed the development of that field. He emphasized that exhaustion of the stagnant, virgin stands opened the way to reasonable profit margins in vigorous young forests, creating the industry forestry field.

Proper recognition of World War I, World War II, and the recent struggle as parts of a long term conflict rather than separate incidents emphasizes the necessity of consistent application of forestry conservation practices, declared M. H. Collett, vice president, West Virginia Pulp & Paper Co. The tremendous industrial plant which has been built in the United States gives us the sinews of strength needed. Conservation and adherence to sound cutting practices offers the only known means of maintaining strength in the forest products industries, he said.

J. E. McCaffrey, International Paper Co., Georgetown, S.C., served as toastmaster at the annual banquet. James D. Arrington, Collins, Miss., was speaker.

Officers and Directors

J. H. Keener, Champion Paper & Fibre Co., Canton, N.C., was elected president for the 1951 term, as we reported last month. He succeeded Mr. Wortham, who became an association director-at-large. A. G. Wakeman, executive vice president and general manager, Coosa River Newsprint Co., was named vice president.

Directors named were as follows:

Area 1. Earl Porter, International Paper Co., Mobile, chairman; C. Y. Townley, Champion Paper & Fibre, Huntsville, Texas; W. C. McDonald, Southern Advance & Bag Co., Hodge, La.

Area 2. Mr. Wakeman; Lloyd D. Hall, International Paper Co., Panama City, Fla.; John Thompson, Johns-Manville Co., Natchez, Miss. Guy Curtis, Gaylord Container Co., Bogalusa, La. (chairman).

Area 3. Ted Earle, Southern Paperboard Co., Savannah, Ga. (chairman); Mr. McCaffrey; N. R. Harding, Macon Kraft Corp., Macon, Ga.

Area 4. J. H. Johnson, Chesapeake Corp., West Point, Va.; Ken S. Trowbridge, North Carolina Pulp Co., Plymouth, N.C.; Walter Schwab, Glatfelter Pulp Wood Co., LaPlata, Md. (chairman).

A.P.A. MEETING

(Continued from Page 80)

Mead Corp.; C. O. Brown, IP; E. P. Hurst, Consolidated Water Power; E. O. Ehrhart, Armstrong Forest. The moderator was M. H. Collett of West Virginia Pulp and Paper Co.

Mr. Atchison was convinced that in actuality ECA gives nothing free to European business men, and defended recent purchases in Canadian pulpwood by Europe as essential for adequate anti-Communist newsprint. He believed that, whether or not ECA continues in future years, European purchases of Canadian pulpwood will go on indefinitely. Reason —no other source of softwood to make

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APRIL 1951



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As moderator of the publicity session, E. J. Gayner, III, of Brunswick Pulp and Paper, recalled the results of public relations in pulpwood increases last war. Without it, he said, mills would have shut down. In connection, H. J. Malsberger of Southern Pulpwood Conservation Association, urged that their program be accelerated and not by-passed. "Proper emphasis on good cutting will make more wood available," he told the woods men at the Waldorf. Charles A. Gillett, of American Forest Products Industries, seconded the theme of publicity and good forest practice. Frank Heyward, Jr., of Gaylord Container gave it a practical twist by saying in essence that "your company should treat the other fellow's forest land as if it were your own."

Representative of the industry east of the Rockies were other panel members who contributed: J. J. Armstrong, Union Bag; E. C. Wall, Canal Wood Corp.; Paul Koenig, Glatfelter Pulp Wood Co.; H. R. Palmquist, Marathon; and F. E. Parsons, Eastern Pulp Wood Co.

And at the American Pulpwood sessions which were notable, among other things, for the very large percentage of management men in the program and in attendance, Tom Busch, of Mobile, wood procurement chief for International Paper Co., in the South, spread his long legs wide apart and told the meeting straight from the shoulder that top management must take more interest in pulpwood production, and included supervisory personnel among those responsible for this attention from the top.

Not only did he frankly title his speech along this tack, but said flatly: "It is about time that the management of the companies take stock of the situation in regard to pulpwood and determine what portion of the high pulpwood costs can be attributed to inefficient operation, and what percentage to the overall rise in prices."

Hon. Sherman Adams, governor of New Hampshire and himself a woodlands man, opened the sessions by reflecting his views that manpower was the key to pulpwood problems upcoming. Specifically he urged anticipating labor needs; close touch with local employment offices; advance planning for imported wood and/or labor; help to government and public and industry by administering "such controls as may be necessary."

Pressure Washing System Announced by Sutherland

A new and highly efficient stock pressure washing system has been perfected and is offered by Sutherland, Incorporated, Trenton, N.J., which will provide complete sales and service engineering for the equipment.

Unique in design, the washing system uses pressure instead of vacuum to remove liquor from pulp. Among the advantages reported are: High capacity; low power consumption; complete absence of foam; clean washing, with low wash water requirements; space saving, through compactness of units and flexibility of installation.

APPLETON AMMONIA TRIALS Badger Burns Calcium Liquor

In early March Consolidated's Water Power & Paper Co.'s Interlake Mill at Appleton, Wis., was ready to proceed with tests that had been scheduled for experimentation with the ammonium base process for making sulfite pulp.

Several last-minute changes in piping that were necessary, plus the usual last minute preliminaries, were all that kept the tests waiting as PULP & PAPER checked just before going to press.

Interlake's new system for using ammonium base is incomplete. Certain pieces of stainless steel equipment were not available for the part of the system where usable sulfur is reclaimed from the vapors that come off the flash tank.

Knowing that current conditions may delay completion of the system over an indefinite period, Leonard E. Smith, manager of the mill, announced on Feb. 28 that, with existing equipment already installed, the tests should get underway.

Still missing are two vital control valves, an injector and a cooler—all for reclaiming the sulfur.

Therefore, it was necessary for Mr. Smith to ask the patience of Appleton residents who might find themselves to windward when the sulfur is released into the atmosphere during the tests.

He explained that to hold up the tests until this sulfur could be reclaimed "would bring about a needless delay in completing the total project to reduce stream pollution."

In the meantime, the close-by pilot plant of the Sulfite Manufacturers Research League was all ready to evaporate

some of the ammonium base liquor as it came from the mill during tests.

Badger Burns Again

After a several week shutdown, Badger Paper Mills at Peshtigo, Wis., again began burning evaporated spent calcium base sulfite liquor (60% solids) in its boilers rigged for this experiment, with assistance of Babcock & Wilcox Co.

Reports from the Sulfite League headquarters at our deadline time indicated that the burning looked better, following changes in the air pre-heating tunnel. No figures were available so soon after the changes had been made.

Fly-ash has been no problem, as only small quantities had been burned. Efforts were being made to gather small quantities of fly-ash samples to observe their composition.

Badger successfully burned 55-62% solids in their regular boilers which had been adapted. The principal change was the adding a tunnel at the back of the furnace for pre-heating air and serving as a combustion chamber.

At 30-40% of the boiler's rated capacity this worked fine. But when more evaporated liquor was sprayed in the quality of combustion dropped.

So it was decided to add a 3-foot length to the tunnel.

Rhineland Paper Co. got notice of delivery dates for its evaporator. The league headquarters announced that delivery of two General American Conkey three-effect flat plate evaporators is scheduled for the coming six months.

VALLEY'S BAGPRINT PROGRAM

Valley Iron Works Co., of Appleton, Wis., plans a long range program of development for the Bagprint Machinery Corp., builders of high speed bag machines, printing presses, rewinders, slitters and electric and mechanical drives. Purchase of the Royal Oak, Mich., company by Valley Iron was reported here last month.

Headquarters have been moved to Appleton but a sales office remains at Royal Oak. Valley Iron's extensive manufacturing facilities will be used in products development.

A new type of cellophane bag machine for producing bags at high speed with combination glue and heat seal is beyond experimental stage. New machines of this type may soon be available for use with polyethylene and Pliofilm. A bag machine known as "Twin-Type," making two bags at a time instead of one, is planned. In production is a new aniline two-color proof printing press.

Inquiries should be directed to: Bagprint Machinery Corp., Subsidiary of Valley Iron Works, Appleton, Wis.

Walter S. Ryan, former president of Bagprint, will remain as sales manager. Cliff Laury will remain as sales engineer for Central and Southern states, headquarters in Chicago.

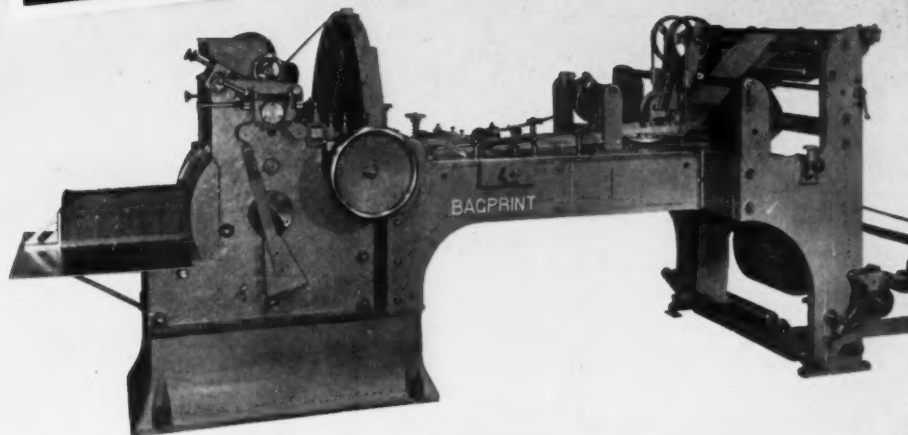
Weyerhaeuser Staff Works as Office Moves

About 20 persons employed in the offices of the Pulp Division of Weyerhaeuser Timber Co. in Longview, Wash., carried right on at their desks and came and went from the office, despite the fact that the whole building was slowly moved a distance of about 250 feet.

The traditional method of moving with jacks and blocks was used and Manager Ray Baker and others had to bear up from kidding by callers, who suggested they move out from under slightly swinging objects.

One freakish but unfortunate accident occurred outside—not inside. George Wolfe, veteran mechanical adviser and retired master mechanic, was warning others outside the building to beware of a taut cable, when it suddenly snapped and whipped his own ankle, breaking it.

Announcement
BAGPRINT MACHINERY CORPORATION
is now a subsidiary of the
VALLEY IRON WORKS COMPANY
"teamed together for greatest service"



Improved Bagprint High Speed Bag Machines
Improved Bagprint High Speed Aniline Printers

BAGPRINT MACHINERY CORPORATION
A SUBSIDIARY OF
V VALLEY IRON WORKS COMPANY
APPLETON, WISCONSIN

PLEASE ADDRESS ALL CORRESPONDENCE TO THE COMPANY AT APPLETON

PULPWOOD SITUATION

Madden, ex-WPB Expediter, Appraises It

James L. Madden, president of Hollingsworth & Whitney, who was war-time expeditor of pulpwood production for WPB in World War II, told the Pulp Producers Paper Week meeting of many grave problems facing wood production in the present emergency, but predicted "the obstacles will be overcome."



High points of his address follow:

"In many respects conditions are similar to those prevailing in 1942, but I feel we gained knowledge from that sad experience. The last time the horse had been stolen before competent men were sent to Washington. Now we are most fortunate to have men of the ability of Messrs. Ticolet and Collet on the production side and Worrell, Diskin, and Brown on the price side, either in Washington or about to be appointed to serve there on a full time basis. With continued attention and vigilance, I believe that the pulpwood industry will overcome the obstacles and produce the raw material required by our mills.

"For those regions which are dependent to any degree upon receipts of wood from Canada, the outlook is discouraging both

as to quantity and price. There is every indication that wood inventories of Canadian mills are below requirements. Conversations should be initiated promptly by our Government with Canadian officials to the end that the defense load is shared equitably and that North American demands are effectively met with U.S. and Canadian mills each getting their fair share.

"Stumpage is a real problem on the West Coast, but there is no indication of a shortage of desired species east of the Rockies, though some prices are fantastic.

"Labor ranges from tight in the Northeast and Lake States to adequate in most of the South, with every indication that areas now faced with labor shortage will find such conditions growing progressively worse. The new Atomic Energy plant in the Carolinas will undoubtedly draw labor from pulpwood production during the construction period.

"Equipment for woods operations is currently adequate, except for such items of heavy equipment as tractors, bulldozers, power shovels and large trucks. It is certain that supplies of all needed woods equipment are going to be tight.

"In the South pulpwood prices are now at an all-time high—but so also is stumpage, labor rates, and the cost of new equipment and the maintenance and operation of old equipment. In the Appala-

chian and Lake States areas, price increases were put into effect during the latter part of 1950 to promote increased wood production so that levels are now at or above those of 1948—which were the highest on record. The wood price situation in the Northeast, particularly in New York, Vermont, and New Hampshire, is a mess, and many feel that the solution is a pricing formula and regulation."



GLEN D. KING (left), appointed Assistant to Paper Mill Supt., Crown Zellerbach Corp., West Linn, Ore. He was based at San Francisco for Central Research Division, and was Mgr. of New Paper Products Development of Central Research.



STEPHEN GOERL (right), who attended Paper Week for the 10th Year. He has several advertising accounts important to the industry, explaining his interest.

UNION BAG ANNOUNCES 6th MACHINE

Union Bag & Paper Corp. announces plans to install its 6th paper machine and also a semi-chemical pulping plant utilizing gum wood at Savannah, Ga., to be completed in early 1953. Machine will be nearly 20 ft. wide and possibly fastest in kraft, increasing mills output to about 1,400 tons per day.

TO DOUBLE HARDBOARD PRODUCTION

Canadian Forest Products Ltd., which has acquired major interest in the Port Melton pulp mill is installing equipment at its veneer division, New Westminster, B.C., to double production of hardboard. Machines include an Asplund Defibrator, and a 400 h.p. ton refiner by Sprout-Waldron.

MILL IN PHILIPPINES COMPLETED

Philippines Paper Mills, Inc., Manila was expected to begin operations in March, producing approximately 20 tons daily of chipboard. The mill layout was planned and engineered by Robert W. Stevens, mill consultant, Los Angeles, in association with George Adamson, Adamson, Inc., exporters.

FLORIDA EXPANSION BY ARMSTRONG

An extensive modernization and expansion program amounting to about one million dollars is now in progress at the Pensacola, Fla., fiberboard plant of the Armstrong Cork Co. The program involves purchase of new machinery, is expected to result in increased capacity. Last year a Fourdrinier forming machine was renovated and a new proportioning system installed.

PAPYRUS TO COTTON STALK PAPER

From rare papyri of Egypt, used as writing material at least as far back as the 4th century B. C., to a new 20th century A. D. Egyptian paper made of cotton stalks is a long jump—but Sandy Hill Iron & Brass Works is doing its best to make it a reality. Recently several bales of cotton stalks were shipped from Egypt to Hudson Falls, N. Y., put through its experimental paper lab. Egyptian Embassy officials from Washington, D. C., were welcomed by President Walter Juckett of Sandy Hill and shown the pulp.

CALENDAR OF MEETINGS

- NPTA—Annual Convention, Waldorf-Astoria Hotel, New York—April 2-4.
- SUPTS.—TAPPI Joint Meeting—Hotel Harris, Kalamazoo, Mich.—April 5.
- COATING MEETING (TAPPI)—Hotel Statler, Boston—April 18-20.
- PACKAGING—National Exposition, Auditorium, Atlantic City, N. J.—April 17-20.
- NAT. MATERIALS HANDLING Exposition, International Amphitheatre, Chicago—April 30-May 4.
- SUPTS.—Southeastern—Jefferson Hotel, Richmond, Va.—May 4-5.
- SUPTS.—Northwestern—Radisson Hotel, Minneapolis—May 4-5.
- FOREST PRODUCTS Research Society—Convention Hall, Philadelphia—May 7-11.
- CPA Technical Section—Summer meeting—Bigwin Inn, Lake of Bays, Ont.—June 7-9.
- SUPTS.—Penn.-N. J.-Del.—Hotel Easton, Easton, Pa.—May 11-12.
- ENVELOPE MFGRS. Assn. Annual Convention, White Sulphur Springs, W. Va.—June 17-20.
- PAPER & TWINE Assn. Annual Convention, French Lick Springs, Ind.—June 21-23.
- SUPTS.—National Convention—Multnomah Hotel, Portland, Ore.—June 24-29.
- SUPTS.—N. Y.—Canadian, Saranac Inn, Saranac Lake, N. Y.—Sept. 6-8.
- SUPTS.—Northwestern—Northern Holiday Resort, Marenco, Mich.—Sept. 14-15.
- NPTA Fall Convention, Stevens Hotel, Chicago—Oct. 4-6.
- SUPTS.—Southern and Southeastern Divs.—Geo. Washington Hotel, Jacksonville, Fla.—Oct 10-12.

*it's stronger...
it lasts longer...
it gives you better service!*

Accurate rivet, forged from copper bearing steel, resists rust. Milled flat at one end locks in steel side bars.

Heavy wearing shoes are sloped to avoid catching and possible damage to conveyor.

Large diameter rivets reduce chance of rivet breakage caused by momentary overloads and corrosion fatigue.

Side bar is accurately blanked from high carbon steel. Chain has higher ultimate strength than ordinary H-Type Chain.

Wide sliding shoes on both edges reduce wear on the chain and trough.

Front faces of barrels designed to act as scrapers. Material does not pack in the trough.

Grease chambers in barrels are factory filled. This prevents "freezing" of chain joints, reduces wear, requires little attention.

NEW REX* COMBINATION-TYPE REFUSE CHAIN HAS OUTSTANDING ADVANTAGES

Here's the finest chain for conveying sawdust, refuse, wood chips and similar material.

Rex Combination-Type Mill Chain is designed to handle assignments that prove too tough for ordinary H-Type Chain.

Check the captions. Each one points out an important reason why this new chain will give you longer service . . . better service . . . and lower overall costs. What's more, it can easily replace corresponding H-Type Chain, since it operates efficiently over the same sprockets and in the same trough.

For all the facts on this new chain, write to Chain Belt Company, 1691 W. Bruce Street, Milwaukee 4, Wisconsin.

OTHER REX FAVORITES IN THE PULP AND PAPER MILLS



Rex H-Type Chain



Rex Steel Chabeco® Chain



Rex Log Haul Chain



Rex Durobar® Combination Chain

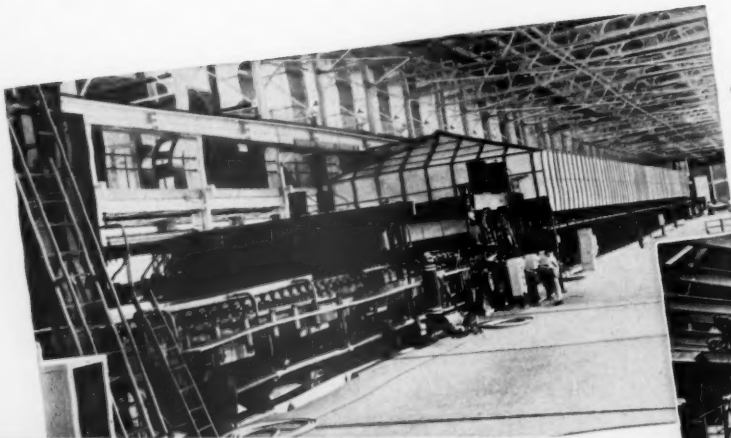


Baldwin-Rex® Roller Chain

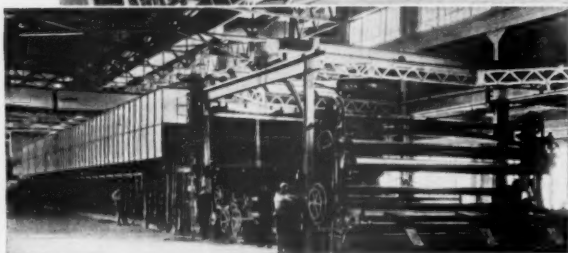
*T.M. Reg. U.S. Pat. Off.



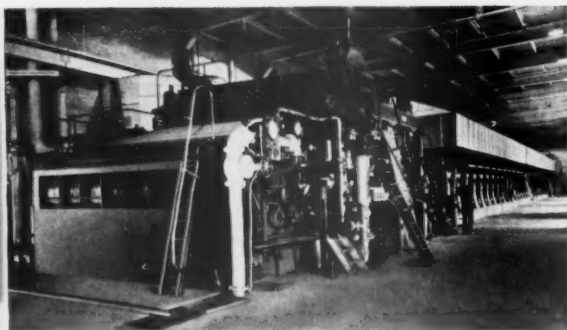
PULP MILL CHAINS



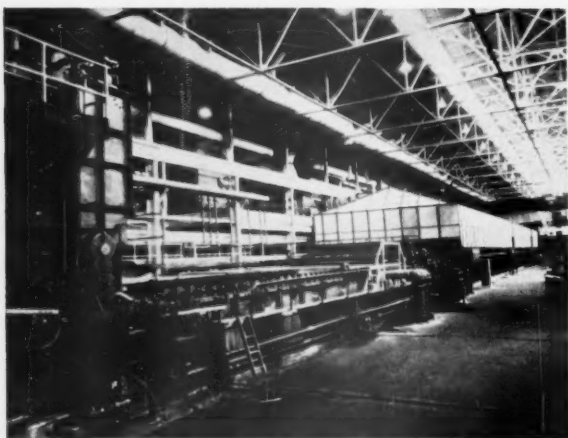
Typical Liner Board Machine



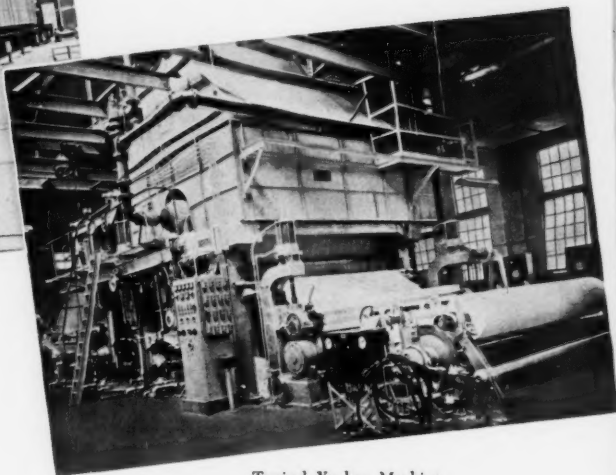
Typical Newsprint Machine



Typical Cylinder Machine



Typical Bag Paper Machine



Typical Yankee Machine

FULL PRODUCTION at Pusey Jones

Take a trip through the busy shops at Pusey Jones. See the new machines under construction — Fourdriniers, Yankees, Cylinder machines. See the exacting efforts of engineers and craftsmen reflected in higher speeds, greater tonnage . . . each machine incorporating the benefits of over 100 years of experience in machine-building.

Under construction is a large, high-speed Fourdrinier machine for lightweight Kraft for a mill in Florida; a Fourdrinier machine for Kraft paper and liner for installation in Colombia, South America; a high-speed Fourdrinier Yankee machine for lightweight Kraft for installation in Louisiana; a large book paper machine for installation in Wisconsin, a Cylinder Specialty Machine for installation in North Carolina, and a large high-speed Fourdrinier machine for Kraft bag paper for a mill in Georgia. Several Stream-Flow Vat Systems are also under construction for board mills in Alabama and New Jersey.

Pusey Jones has just delivered a Fourdrinier machine for ground-wood specialty papers to a mill in New York State, and a three-roll newsprint machine for India.

Talk over your paper-making problems with Pusey Jones engineers. Get all the facts on the high-speed, quality production machines that are coming from Pusey Jones. Write today.

THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-Making Machinery
Wilmington 99, Delaware, U.S.A.



WAR PACKAGING EXPLAINED

230 Hear Problems Discussed

To stress the vital defense need of educating government contractors in the proper application of military specification packaging, the Chicago Section of TAPPI sponsored a panel discussion of war packaging at its monthly dinner Feb. 19 in the Chicago Bar Association quarters, Chicago. Attendance was one of the largest in the history of the organization, with more than 230 sales and technical personnel participating.

M. C. Bilow, chief of packaging section, Chicago Ordnance District, and one of the panel speakers, cited the huge amount of damage to overseas and even state-side shipments early in World War II. He said that a much higher percentage of the blame for early military setbacks than is generally realized should be charged to poor packaging, because so much vital material arrived at Island bases and forward positions in utterly useless condition.

Also panel speakers were Edward Greenman, development engineer, Mid-States Gummed Paper Co., and L. M. Burgess, field engineer, H. P. Smith Paper Co., both of Chicago. Mr. Bilow pointed out that the great improvement in war packaging, which was finally brought about by the writing, testing, and proper application of military specifications so definitely increased the efficiency of our supply operations that only specification packaging will be accepted by the military in the present emergency.

"This time," he said, "Packaging specifications must be followed by contractors."

He pointed out that, in a majority of cases, military packaging costs run from 13% to 20% of the total contract price and admitted that this is a difficult fact to grasp, since the figure is much lower on commercial orders, but one which must be faced if a good job is to be done, and if the contract is to be completed without loss to the company.

Mr. Bilow declared that the great need now is for "consultants" or teachers: men who daily call on the top production men at contractor's plants to give them help in understanding military packaging specifications, and in obtaining approved packaging materials. He said that the logical men to do this vital job are the packaging suppliers' salesmen, but cautioned that in order to be of constructive help to the military, their companies, and themselves, they must study the specifications and really know them.

Mr. Greenman said that improvements have been made on rust inhibiting dipping compounds and acidity controlled greaseproof barriers so that a satisfactory

functional package evolved. This was designated as Method I.

One of the new packaging methods for war use is now known as Method 1-A. Items which can be packaged by this method are automotive parts, bearings, gears, pistons, rifles, spark plugs, and valves. Method 1-A is a modified Method I with the additional requirement that the package is sealed so that it is completely waterproof. In order to insure positive protection to parts in the Method 1-A classification, first the part or assembly must be properly cleaned and preserved. Second, the properly preserved part must be enclosed in a waterproof packaging medium.

Mr. Burgess explained the so-called JAN specifications, in which the JAN stands for Joint Army and Navy, there are two general methods of packaging where sealing is required: Methods IA and II (JAN-P-116). In Method IA sections IA-3 and IA-8 as well as in Method II the use of pouches or containers is the standard procedure. In Method IA it is permissible to package without a desiccant and in Method II a desiccant or drying agent is required.

William A. Roberts Named Allis-Chalmers President

William A. Roberts, newly elected president of Allis-Chalmers Mfg. Co., was executive vice president in charge of the tractor division since 1947. He succeeds the late Walter Geist.

W. C. Johnson, formerly executive vice president in charge of the general machinery division, was named executive vice president for the entire company.

J. L. Singleton, formerly vice president and director of sales, general machinery division, was named vice president in charge of the general machinery division.

Mr. Roberts was born on a farm near Osceola, Mo., on Aug. 25, 1897, the son of Charles Wilson and Valeria Alma nee Embry. He attended Springfield Business College, Springfield, Mo. He joined Allis-Chalmers tractor organization as a salesman in the Wichita, Kans., branch in 1924.

Book on pH Control

"Applications of Industrial pH Control" by Allen L. Chaplin has been published by Instruments Publishing Co., 921 Ridge Ave., Pittsburgh 12, Pa. It covers some theoretical conditions and also problems of actual pH control applications in industry. In pH regulation, he explains the problems contrast sharply with conventional controls and techniques.



Ferguson and Smith Continue Alvin Johnson Co.

George H. Ferguson (left) and Eric R. Smith (right) for the past several years project engineers on most important engineering jobs under the late Alvin H. Johnson, consultant and designing engineer, announce arrangements with the latter's estate to continue operation of the business. They will retain the traditional name of Alvin H. Johnson Company, Inc., and the headquarters, 415 Lexington Ave., New York.

Both Mr. Smith and Mr. Ferguson expressed themselves as determined to carry on the same policies and professional standards for which Mr. Johnson was so well known. Of interest is that theirs is truly a coast-to-coast partnership, inasmuch as the earliest profession work of Mr. Smith was in and around Portland, Ore., and that of Mr. Ferguson in Portland, Me.

Mr. Smith is a 1923 graduate of Oregon State College in electrical engineering; spent several years with General Electric specializing in pulp and paper mill electrification; later with a utility in northern New York, and in the research and development department of Scott Paper Co.

Mr. Ferguson, who in 1922 graduated from Maine in civil engineering, has been long associated with the industry, including periods with Great Northern Paper Co.'s engineering department at Millinocket; later with his uncle, H. S. Ferguson, now often called dean of pulp and paper mill engineers. He worked on projects at James MacLaren Co., Bathurst Pulp & Paper Co., Puget Sound Pulp & Timber Co., Crossett Paper Mills, Hollingsworth & Whitney Co. at Mobile, and others.

Official Report Favors Pulp Mill in West

Timber resources of the Kyuquot district on the west coast of Vancouver Island lend themselves to establishment of a pulp mill in that area, according to a report of the British Columbia Forest Service.

The heavily timbered Kyuquot region is now estimated to carry more than 19 billion bd. ft. of merchantable timber. More than 8.5 billion feet of the total is western hemlock and 4 billion feet balsam, the balance being mostly cedar and fir.

NEW AT "PAPER WEEK"

THESE MACHINES MADE CURTSIES

The TAPPI sessions at 1951 Paper Week were strongly and appropriately directed toward equipment and processes for better and faster production. While this was due primarily to mobilization interest, it is in no sense a derogatory implication to say that gradually other special national meetings have drawn off considerable general material which in earlier years would be taken up Paper Week.

The annual Engineers' meeting in the Fall (it's October in Savannah this year); the pulping sessions in the Southeast; coming chemical meetings in New York and Appleton, and agricultural residue sessions as well as other and occasional specific regionally, have all helped to take some load off Paper Week. And although the Superintendents Association does not participate in the Paper Week program as a group, its own technical sessions, while in no sense competitive, have been attracting larger registrations, as have TAPPI's. The coming Superintendents' National in June at Portland, Ore., was efficiently plugged by their National President, Charles Ackley of Crown Zellerbach, Harold Bialkowsky of Weyerhaeuser, and others.

But, as the continually growing attendance proves, the TAPPI show at Paper Week is by no means minor. The combined TAPPI and APPA sessions, with other group meetings from the industry, still make February and New York the time and place of "the national convention" in the minds of the industry.

This year excitement and interest was high, because technical men were meeting on the eve of increased mobilization activities and knew that vaster responsibilities and seemingly insuperable tasks were ahead. Another unusual phenomenon this year, too, was the noticeable trend wherein the mill men sought out the suppliers and machinery men, instead of the other way around! But there was no war-time lack of interest in service on the part of the sales forces, and they were meeting the complicated questions of materials and delivery with frankness.

Inasmuch as machinery and processes were the feature, PULP & PAPER has here—for the benefit of busy readers who did not attend Paper Week or the many who could not make all the meetings in which they were interested—by illustration and briefed text, puts on view some of the outstanding papers.

Waco Filters at Scott

One of the leading discussions in the Water sessions chairmanned by A. S. Erspamer, P. H. Glatfelter Co., was built around the installation of the new waste disposal plant at Scott Paper Co., Chester, Pa., as related in the paper by David R. Wadleigh and L. G. Simons, the former of Scott and the latter with Charles T. Main, Inc., of Boston. This plant has five of the recently introduced Waco water filters (see photograph No. 3) introduced from abroad by Impco. Fully meeting strin-

gent Pennsylvania requirements and having received the approval of State authorities, the installation has been of wide interest.

The paper, in fact, outlined the Pennsylvania pollution history as background. Thus those attending took away not only equipment facts, but suggestive ammunition for their own local discussions. The tests reiterated gave capacity of 600 gpm but the capacity increased to 1400 gpm operating on lean waste water at 1.5 pounds of fiber per thousand gallons—the lower gallon per minute figure being on paper machine white water of eight pounds per thousand gallons.

The original test was on an initially installed Waco which led to the four additional filters around which the system is built. The water collection system at Scott is novel, the plant operation being fully automatic and attaining 90 percent efficiency in recovering fiber coming in. The collection is by an open flume overhead receiving white water from numerous pipe lines leading to individual pumps. The 100,000 gallon collector tank evens out the surges. Machine furnish is used for a precoat and together with recovered fiber is returned for use. Unusual is the fact that pilot plant studies have been borne out by six months of operation at Chester, the mill engineer and his collaborator aver.

Morden "Slush-Maker"

R. Burke Morden, vice president and general manager, Morden Machines Co., Portland, Ore., presented a paper on the "Slush-Maker" Pulper (see Photograph No. 2), a new machine developed by his father, C. W. Morden, after studying for some years to develop a unit that would round out their equipment in stock preparation. Just as the "Stock-Maker" took over the beating function of the beater, this aims to provide a unit that does all the breaking, mixing and preliminary treating that is often done in the beater before "Stock-Makers" or other beating and refining equipment. In addition, with the advent of the present-day pulpers, mills seemed more and more concerned with break up of remaining fiber bundles from the pulping process. The "Stock-Maker" is designed for this but it seemed more logical to develop an all-purpose pulping and mixing unit that could do the whole job and leave the "Stock-Maker" free to treat the well slushed furnish, said Burke Morden.

They have been testing a pilot machine in a shop in Portland for more than a year

under a wide variety of conditions and types of pulp, paper and broke, even on high wet strength paper. Two West Coast and one mid-West mill have provided materials and are analyzing the results. Their first unit should be in operation in late March.

Alkaline Pulping

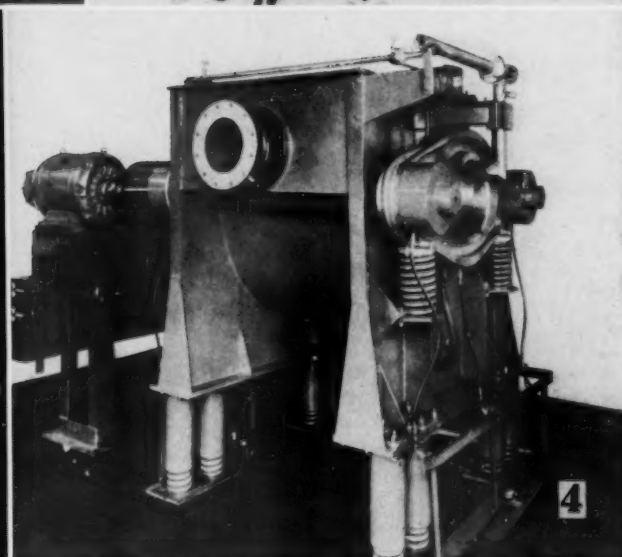
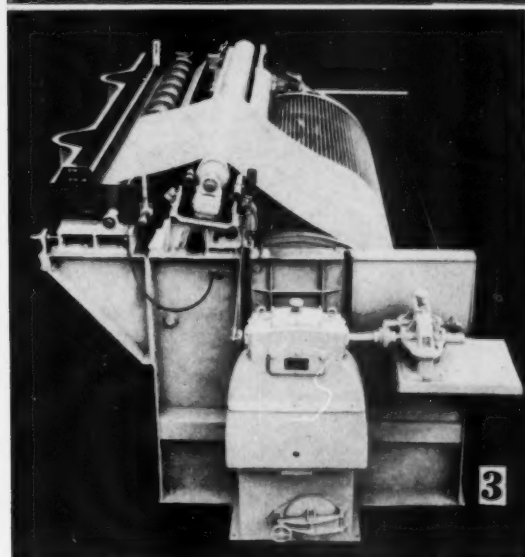
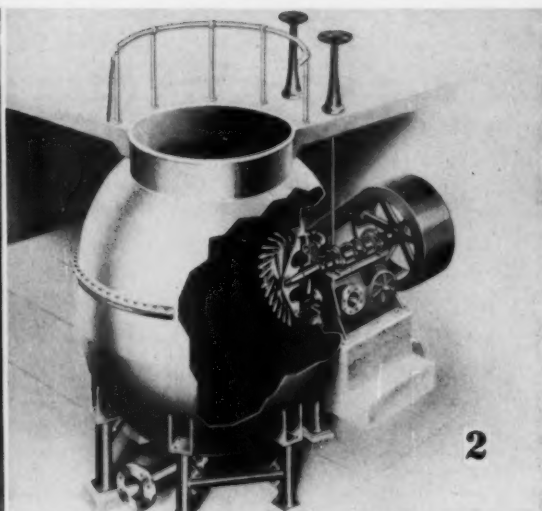
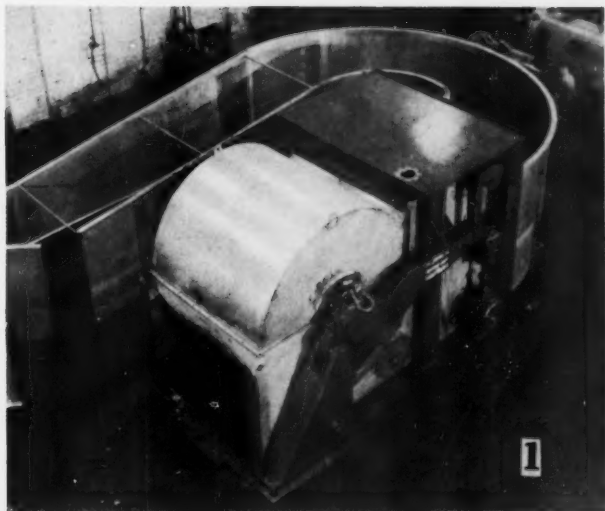
The highlights of two leading papers in the always popular Alkaline Pulping sessions, led this year by Henry Vranium, Chesapeake Corp. of Virginia, have already appeared in recent issues of PULP & PAPER. They were "Properties of High Yield Kraft Pulps Produced at Bathurst" by J. McK. Limerick of Bathurst Power and Paper; and "Rate of Beating of Pre-Refined Kraft Pulps" by H. Wyatt Johnston, Sutherland Refiner Corp. of Montreal, and W. C. Lodge, Pulp and Paper Research Institute of Canada.

Two infrequently discussed species for pulping were on the alkaline program. Dr. Harry Lewis of the Institute of Paper Chemistry discussed redwood as a new potential source; and C. W. Rothrock, Jr. and William J. Nolan, University of Florida, studied scrub oak as a possibility. Messrs. Bailey, Forsyth and Andrews of IP revealed their conception of factors in color reversion of bleached secondary fiber. Dr. Lewis stressed the rather large amount of second-growth redwood becoming available, and its possibilities by various pulping methods, including Asplund and Masonite processes.

New Jones Beating Unit

Also discussed at Paper Week was E. D. Jones & Sons Co.'s advertised new Jones Beating Unit (see Photograph No. 1). It was in the Convention Dailies.

The Jones Beating Unit is completely self-contained, and is preassembled into a "Package Unit" at their Pittsfield, Mass., shop, to eliminate possibility of misalignment and complicated erecting problems at the purchaser's mill. Jones men said in the old days of small beaters, light rolls, and one bed-plate, this was not so important, beaters are now precision instruments and in fact, a beater needs to be a precision instrument when it uses between 200-HP and 400-HP per beater roll. This power is put to use on the paper stock by means of very heavy rolls and the use of multiple bed-plates which again necessitate very accurate alignment to maintain all plates at top efficiency. The Beating Unit can be installed in multiple units for continuous stock treatment and as many units as necessary can be used to obtain the desired results. The stock treatment can be varied from unit to unit depending upon the pulp being processed and the type of papers being made. In case of accident or repairs to one unit, it



IT WAS A NEW MACHINERY YEAR at the sessions of the Technical Association of the Pulp and Paper Industry, held in late February in the Commodore Hotel in New York. Among the new equipment which received their baptism of fire were the above:

- 1—E. D. JONES & SONS CO.'S Jones Beating Unit. A pre-assembled "Package Unit" eliminating possible erection errors. Not really a new machine, but a re-application to present day precision beating problems, it incorporates design features of Jones Bertram Beaters; can be installed in multiple units.
- 2—MORDEN MACHINES CO.'S "Slush-Maker" Pulper—a new development designed by C. W. "Whit" Morden to round out Morden stock preparation offerings. Just as the "Stock-Maker" is used in the beating function, the "Slush-Maker" is designed to do all the breaking, mixing and preliminary treatment often done ahead of the "Stock-Maker."

- 3—IMPROVED PAPER MACHINERY CORP.'S Waco Filter. A paper on its performance for Scott Paper Co. was given at the Paper Week sessions. This shows a 14-ft. length Waco Filter from drive end, showing enclosed drive on the main cylinder, pre-filter cylinder mould, couch roll, guide roll and wire guide. Last month we reported how a Waco Filter at Sonoco Products, third installed in U. S., recovers about 99% of the 1 lb. per 1,000 gals. of water which goes to the filter for re-use as furnish. Sonoco's capacity is 1600-1900 gpm.

- 4—BIRD MACHINE CO.'S Vibrotor Screen. Bird has also brought out a Bird-Gibbs Clarifier (described and photo published in recent issue of PULP & PAPER. For clarifying water after it leaves machine). This new screen combines vibration and rotation to achieve high quality, high capacity screening of chemical pulps and certain grades of paper and board.

can be bypassed and the paper-making process continued without undue interruption. The unit incorporates design features of Jones Bertrams Beater installations.

Charles H. Vickery, vice president of E. D. Jones & Sons, talked on influences of temperatures during beating in bringing in mention in sessions of the Jones beater applications.

Paul Boronow of Valley Iron Works was the featured speaker on slices which

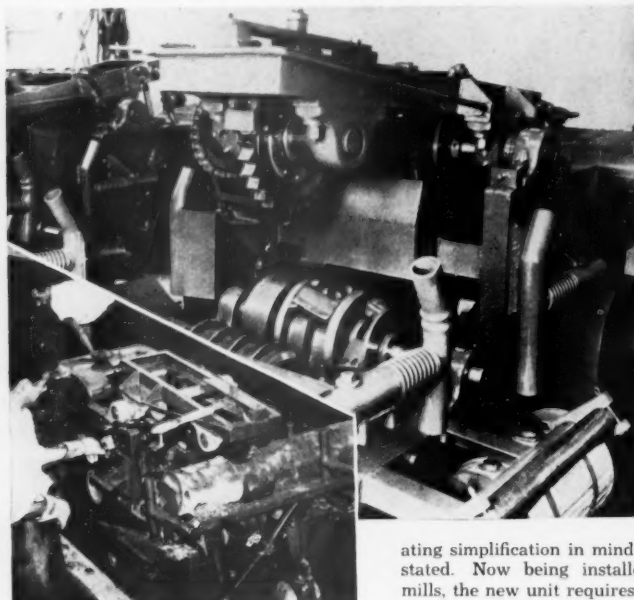
was half the evenly divided attention given to the two subjects at the Four-drainer Papermaking sessions (B. L. Kassing of Nekoosa-Edwards handled the second half, on paper) and the author illustrated his talk with various types of Valley Iron slices, describing different treatments required in various papermaking methods. He was valuable to those present answering specific questions as to positioning of slice distributing rolls, effect of a number of rolls in headbox prior to

slice, and general information relative to keeping slices in good operating condition.

Bird Vibrotor

A notable new equipment featured in the Mechanical Pulping session in a paper by Sven Fahlgren of Bird Machine Co. is the Vibrotor screen (see photograph No. 4) relatively new in the North American mills. Based on the experiences with the earlier Jonsson screens, the Vibrotor was invented in Sweden from

THE SANDY HILL PEPPY PEELER, shown here, is not really new—as it has been used as a portable peeler for several years in the Hearst, Ontario, section of Canada to peel pulpwood and mine props. But it is receiving much attention now in the South and other regions. Here is a view of the Peeler in action; also a closeup of its parts—Universal feed sprocket is top foreground of picture; below are cutter head, knatter, worm, flange wheels and the piping are pusher arms.

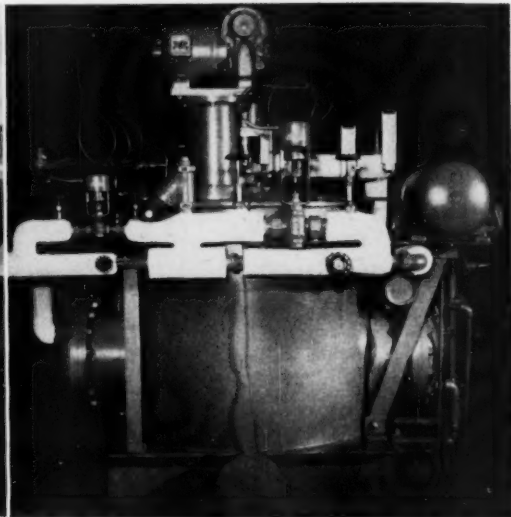


which the paper's author recently returned after an extended business trip there. Mainly a rotating and vibrating drum in a vat enclosure, the Vibrotor is an inward flow screen that can be operated without overflow. Strong showers inside the cylinder makes cleaning a thorough job. But the primary advantage claimed is higher vibration frequency, which gives the screen higher capacity and requires minimum power. High consistencies are also possible, and Mr. Fahlgren likewise stressed the small amount of floor space—said to be 25 percent less than for more familiar operations to handle the same capacity. Bird-Gibbs Clarifier, for continuous and thorough clarification of mill waste water, which was shown in a recent issue of PULP & PAPER, were among other new machines discussed informally at the Commodore. In foreign and domestic installations already made, the Vibrotor is producing 50 to 80 tons of screen pulped per day, handling 1.3 to 1.5% consistency and requiring only 1/3 hp or less per ton. It consists of a rotating cylinder supported by non-ferrous alloy yokes and rotating in a vat. It is vibrated by eccentric shafts through the yokes.

Hercules Emulsifier

As usual, some companies took occasion of Paper Week to introduce to the industry press certain equipment not discussed in formal papers, but among new devices and processes nevertheless. Among these was a new simplified automatic emulsifier for rosin size by Hercules Powder Co. (see Photograph). This is an adaptation of the original Hercules automatic emulsifier with more economical first cost and oper-

ating simplification in mind, the company stated. Now being installed in several mills, the new unit requires approximately six by six feet of space, and after installation requires only customary maintenance, the Paper Week announcement revealed. It was emphasized that Hercules is not entering the equipment field, but supplies this equipment in connection with its supplying of rosin size to paper mills. The move is occasionally traditional with the company, having been done by them in the instrumentation field when certain specific indicators for use in connection with chemicals have not been practically feasible for manufacturers.



Reports on NH₃ and MgO Pulping

Lauren La Fond and Walter F. Holzer of Crown Zellerbach in the Far West interested several hundred technical men at Paper Week with their discussion of ammonia base cooking in the Acid Pulping session. As readers of the March PULP & PAPER know, in experimental substitution of ammonia base in sulfite cooking, liquor has already been shipped from Wasau Paper Mills at Brokaw and evaporated by the Rosenblad system in connection with General American's engineering, and burned in the B & W furnace at Consolidated Water Power. The latter was ready to start its own Interlake mill on ammonia for more thorough and longer cooking.

However, as our March story indicated would be the case, the La Fond-Holzer paper reported favorably on substituting ammonia for milk of lime in the Lebanon, Ore., mill of Crown Zellerbach, insofar as its effect on sulfite pulp quality and effect on present equipment is concerned. Soundview has joined C-Z in the experiment at Lebanon. Evaporation and burning began in March with a one-effect evaporator and boiler already in the mill.

As announced at the session by John M. McEwen, Pulp Division, Weyerhaeuser, chairman of Acid Pulping, the newest data on MgO operations at Longview was not ready as expected and therefore the paper which was to be read Paper Week by a Babcock and Wilcox engineer from their Alliance research organization, is to be read at a later date. At that time the new data will be incorporated. It is not yet known whether the address will be featured at a regional session of TAPPI, or be held for some pulping session in the Fall.

The New Peppy Peeler

Douglas Philbrook, young former State trooper and in recent years at the helm of the Northeastern Wood Utilization Council and active in meetings of the pulpwood group in the New England area, delivered the paper on the new Peppy Peeler (see photograph). This equipment, due to changing factors in woodlands and mills, has brought this peeler, manufactured by Sandy Hill Iron and Brass Co., into the spotlight. Mr. Philbrook characterizes the Peppy Peeler as honestly portable as well as economical and adaptable. And, as he stated, "always in relation to the needs of the situation." Powered by gasoline, diesel, or electricity, it is seemingly a good combination of lightness and strength. Field views by PULP & PAPER editor have borne out many of Mr. Philbrook's views of the new peeler, on both hardwood and softwood, and on various water contents, not to mention emergency falls such as storm-killed or pest-killed trees. There is said to be an economical fiber loss even on frozen wood which is such a problem in some areas habitually, and in more and more areas on occasion. The speaker's figures on cost and production were acceptable.

(Continued on Page 113)

All Steam for Potlatch Mill

Supplied by C-E UNITS



During the last week in December 1950 Potlatch Forests, Inc., with a long history as a logging and lumbering enterprise founded by the Weyerhaeuser interests, started up its new Pulp and Paper Division mill on the Clearwater River above Lewiston, Idaho.

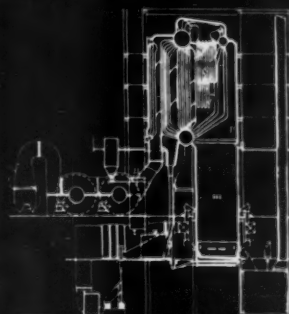
All steam for this modern mill, which will turn out a large variety of container board, tag stock and kraft papers, is supplied by power and recovery boilers furnished by Combustion Engineering—Superheater, Inc.

The C-E Recovery Unit is designed to burn 464,000 pounds of dry black liquor solids per 24 hours and will produce steam at 610 psi and 730 F.

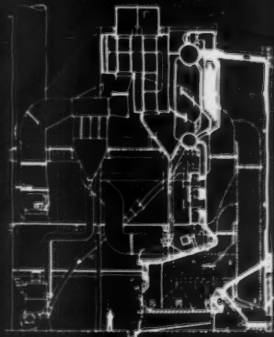
The power boiler features a furnace of unique design arranged to burn hogged wood, pulverized fuel and oil—alone or in combination as desired. The hogged fuel is burned in the lower furnace on a C-E Spreader Stoker. C-E Raymond Bowl Mills will supply pulverized coal to horizontal burners in the upper furnace wall. Design capacity is 200,000 lb of steam per hr at pressure and temperature similar to the recovery unit.

C-E Steam Generating and Recovery Units are in service in many of the leading pulp and paper mills throughout the United States, Canada and abroad.

B-474



C-E RECOVERY UNIT



C-E POWER BOILER



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APRIL 1951

101

PORT MELLON B. C., KRAFT MILL EXPANDS

The Port Mellon, B.C., pulp mill, idle for nearly two years since Sorg Pulp Co. ceased operations there, will be back in production by May 1, under the new name of Howe Sound Pulp Co., Ltd.



Announcement of the new organization and \$5,000,000 program of modernization and expansion at Port Mellon and Eburne, where most of the wood chips will be produced, was made to PULP & PAPER by L. L. G. Bentley (shown in picture), vice president of Canadian Forest Products, Ltd., which has a 75% interest in the new company and exclusive management.

While the pulp mill is to start with production close to 140 tons a day, the peak under the former management, it is planned to bring this up to 175 tons by the time the reconstruction is completed within a year, and provision has been made for ultimate expansion to 350 tons daily of bleached sulfate pulp.

As previously announced in PULP & PAPER, other groups interested in the Howe Sound Pulp Co. are Sorg Paper Co., of Middletown, O., former parent company, and Perkins, Goodwin Co. of New York, with 20 and 5% interest, respectively. Sorg Paper Co. will receive 15,000 to 25,000 tons of unbleached pulp annually. Perkins, Goodwin Co. are exclusive agents for sales. Canadian Forest Products, Ltd., has entered into a 50-year contract for supply of raw material, either logs or chips.

Mr. Bentley says it is the intention to operate the Port Mellon mill almost entirely on sawmill chips from the Eburne

division of Canadian Forest Products, whose big sawmill is on the north arm of the Fraser River near Vancouver.

To meet the increased demand for chips, new developments are already under way at Eburne. A 62-in. Hansel ring-type whole log hydraulic barker has been ordered for Mills 1 and 2 at Eburne, and a 36-in. Hansel barker is to be installed in Eburne's No. 3 mill, which handles smaller logs. Pumps for all barkers will be supplied by Bingham Pump Co., Portland, Ore.

A Sumner slab barker and chipper, which have been in operation at Eburne, will be used on sawmill material purchased from other companies.

Additional Sumner chippers have been purchased for Eburne—an 8-knife, 60-in. machine for No. 1 mill and a 54-in. chipper for No. 2 mill, so there will be four chippers at Eburne preparing chips for Port Mellon.

It will be possible to eliminate altogether the sawmill at Port Mellon. However, it is proposed to have a standby wood plant at Port Mellon, served by a Hansel whole-log 42-in. ring barker and 50-in. chipper.

The pulp mill is being entirely modernized. Facilities for chip storage are to be established. A new continuous causticizing unit is being installed with a new lime kiln. The execution of improvements and planning are in the hands of Sandwell & Co., headed by P. R. "Dick" Sandwell. Overall construction is being carried out by B. C. Bridge & Dredging Co., which built the Bloedel and MacMillan mills on Vancouver Island.

The pulp drying machine is being enlarged and two additional digesters are to be installed.

The British Columbia government has undertaken to build a road connecting Port Mellon with Gibsons Landing this

year. In the past the mill community has been virtually isolated.

Port Mellon, being only a 25-mile tow away from the Vancouver area, is in favorable location for the receipt of chips from that region, where much lumber production is concentrated. For the time being a hammerhead crane with bucket will unload chips from barges, but the company is studying possibilities of pneumatic unloading.

Resident manager at Port Mellon is Rudy Paradis, former manager there for Sorg Pulp Co., and who has been with Brown Corp., in Berlin, N.H., and La-Tuque, Que. In charge of administration at the mill town is Harry MacDonald, brilliant young economist, who won a Rhodes scholarship while working as a night watchman at Eburne.

They will work directly under a directors' executive committee: Mr. Bentley; John G. Prentice, president of C.F.P., and William McMahan, manager of the timber and logging division.

Established about ten years ago, the Canadian Forest Products group is today an important manufacturer of lumber, plywood, hardboard and shingles and is listed among the province's largest timber holders.

CFP's program gives effect to a policy long contemplated for maximum economic use of its forest domain, and follows a trend among large sawmill operations in British Columbia. Three years ago Bloedel, Stewart & Welch completed its kraft mill at Port Alberni. Last year H. R. MacMillan Export Co. opened its kraft mill at Harmac, near Nanaimo. Canadian Western Lumber Co. entered partnership with Pacific Mills for a newsprint mill at Duncan Bay. A few months ago, Alaska Pine Co. integrated its operations with Abitibi in the acquisition of the B. C. Pulp & Paper Co., under the name of Alaska Pine & Cellulose Co.



One of the Men Behind Eastwood Wires

Douglas R. Kidde—Wizard of the Looms

Doug knows looms as only a man who has been fixing them for 36 years can know them—inside and out, every single part of the complicated machines.

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A true craftsman in the finest tradition, Doug is another Eastwood-Nealley employee whose work enables us to offer, with pride, Fourdrinier Wires for the finest paper mills in the country.

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We don't do it a certain way just because the book says so. Our engineers are strictly grass roots operators. These practical men spend much of their time in the field, busying themselves with whatever will cultivate the cabbage for paper manufacturers. Then, while they're bristling with ideas and red hot with enthusiasm, they translate their thinking into the machines of the future.

Moore & White definitely does not go serenely on manufacturing the tried-and-true nifties of a bygone era. We know from close, constant contact with the industry how in-

creasingly complex are the production problems which crowd the paper-maker... how infinitely varied are the factors which put the snatch on his profits. From this experience, and the desire to serve, flows a steady stream of modern Moore & White equipment.

Several of these major components have just weathered exhaustive tests and will be made available to you

promptly. When you see these newly designed machines, we think you'll say that Moore & White has indeed paced the trend and anticipated your needs to a remarkable degree.

If you have not had a Moore & White sales engineer look over your plant lately, put in a call for one. Tell him to take a crack at your present problems and forestall future trouble. It's his dish!

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Maine, Syracuse, and Appleton Alumni Meet



IN RECOGNITION OF HIS ESTABLISHMENT of first pulp and paper course at University of Maine, often called cradle of technical development in the industry, DR. RALPH McKEE, consulting chemical engineer of New York, receives illuminated scroll from J. L. OBER, chairman of University's Pulp and Paper Foundation and Vice President of Scott Paper Co., during Paper Week at annual alumni luncheon. Observing are Maine men Dean Ashley S. Campbell, of the University; Ralph A. Wilkins, Vice President of Bird & Sons; F. A. Soderberg, General Dyestuff; P. S. Bolton, Research Director for Robert Gair, Inc.; Thomas G. Mangan, International Paper; John Calkins, U. of Maine; Clifford Patch, Eastern Corp.; Ralph W. Ramsdell, Penick and Ford (elected Chairman for 1951-52); Prof. Lyle C. Jeness, Dean of Chemical Engineering at Maine; and Henry Booth, Luncheon Chairman.

Interest and attendance at the various alumni luncheons has been steadily increasing due to the growth of Paper Week and factors inherent in the industry, as well as to research projects under way. This year, for example, there were nearly a hundred at the M. I. T. luncheon, shaped up by retiring TAPPI president Al Bachmann and other leaders, and the Institute of Paper Chemistry annual brought out a record crowd, according to report by Dr. Harry Lewis, dean of the Institute.



Steadily consolidating its forward position in industry progress and research under the work of Prof. C. E. Libby and staff, the University of Syracuse, College of Forestry (pulp and paper division) elected Walt B.

Morehouse (in picture) as president during the 17th annual luncheon at Hotel Roosevelt. He is manager of paper products division, Nopco Chemical Corp., and succeeded T. M. Cook of the W. R. Grace Co.

Others elected were Lionel M. Sutherland, vice president; and Clark Snook, secretary-treasurer. Mr. Sutherland is secretary-treasurer, Sutherland Refiner Corp., and Mr. Snook, chief chemist of Nopco. Speakers at the Syracuse gathering were A. G. Vannote, Champion Paper & Fibre; Frank C. Ash, president of Oswego Falls Paper Corp.; and Prof. Libby and F. S. McManus of the University's College of Forestry. Board chairman Reuben Robertson, Sr., of Champion Paper, was guest of honor.

As pictured in the exclusive photograph in these pages, chief spotlight at the University of Maine luncheon at the Biltmore was on Dr. Robert McKee, New York consultant, who received a scroll of honor as founder of the first pulp and paper course at Orono from Tom Mangan, chairman of the affair. A report was made by C. L. Ober, vice president of Scott Paper Co., as chairman of the fund committee of the year-old Pulp and Paper Foundation to build further on the solid base claimed by Maine as "cradle of technical progress in the industry" because the Orono campus saw the first formal pulp and paper school in the U.S., and one kept alive currently by Prof. Lyle C. Jeness.

The present size of Paper Week meetings has planted seeds of future alumni gatherings. Small groups from other colleges and universities are seen to cohere for a luncheon or two, minus program, during Paper Week. Among these who spoke definitely of formal Paper Week conclaves possibly next year were those from the Univ. of Washington at Seattle.

New Finishing Room at Rhinelander Described



Leonard Parkinson (left), superintendent, Rhinelander Paper Co., Rhinelander, Wis., assisted by John S. Kay (right), Rhinelander's efficiency engineer, told the Michigan Division of the Superintendents Association about the finishing room at their mill—one of the newest finishing rooms in the Middle West, at a Feb. 15 meeting in Kalamazoo.

Mr. Parkinson said walls of the room are of white tile; floor area is 160 by 120 feet; and there is room for 10 railway cars under cover in the department at the shipping end. He commented that nearly half the room is given over to sheet production, although this production amounts to only about 20% of the whole. Stress was placed on equipment employed for handling rolls.

Mr. Parkinson was assisted in the discussion and in showing pictures of the room by Mr. Kay. As efficiency engineer at Rhinelander, Mr. Kay is responsible for minimizing waste in the mill. Considerable savings have been effected by checking back on all waste and on the source of supply in the broke boxes, he said.

Films covered practices in the finishing room of Champion Paper and Fibre, Hamilton, and shipping techniques in Southern textile mills. O. W. Callighan, chairman, presided and Dr. Alfred H. Nadelman of Western Michigan College, served as moderator. On the panel were H. B. Johnston, plant engineer, Allied Paper Mills; Richard H. Peeters, finishing superintendent, St. Regis, and John C. Wood, vice president in charge of manufacturing, KVP.

Plane for Gardner Co.

The Gardner Board and Carton Co. recently acquired an airplane, a twin-engined Beechcraft.

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Three Rivers School Uses Miniature Machine

Three Rivers, Que., frequently described as "the newsprint capital of the world," with some of the largest mills located there, also may boast the world's smallest newsprint mill.



This miniature model is in the Provincial Paper School of Three Rivers, which is headed by Gaston Francoeur (shown in picture) its first graduate, who has a staff of ten professors. Its importance is two-sided—as a training ground for future Canadian papermakers and as a research laboratory.

Since it is not practical to bring a large newsprint machine to a stop for experimental purposes, much of the research that could be carried out in the industry has been curtailed through lack of adequate facilities. But the Three Rivers machine, using small-size logs and turning out rolls a foot or two wide, wallboard a few inches square or fine paper in miniature sheets, is both useful and economical.

The Quebec government erected the model mill at a cost of more than \$1,000,000.

The machine was designed by Stadler, Hurter & Co. of Montreal and New York, and it was made by Bagley & Sewall Co., Watertown, N. Y. It makes extensive use of stainless steel.

The three-year course leading to the degree of paper technician, which is to be awarded by the Three Rivers School, covers everything from pure theory to the overall operation of a mill and servicing of machinery.

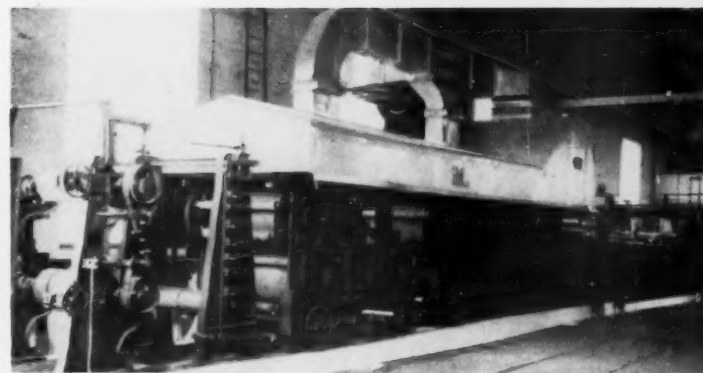
NEKOOSA-EDWARDS EMPLOYE SURVEY Reveals Profits Misunderstandings

A Wisconsin papermaking company has found the survey technique a valuable tool in its employee relations program.

Officials of Nekoosa-Edwards Paper Co., Port Edwards, Wisconsin, felt their employees needed an improved information program based on company operations and policies. To eliminate guesswork, the company's personnel department designed a 31-question written quiz which was given to a cross-section group of mill employees.

Purpose of the survey was to determine which subjects needed most emphasis, which were most interesting to employees, and to provide a measuring stick for future information programs.

The survey was conducted on the job. When completed, the questionnaires were tabulated by machine to insure anonymity of those who took the test. Included in the survey were questions on company profits, stockholder dividend payments,



MINIATURE PAPER MACHINE of Paper School at Three Rivers is one of smallest in world, but is complete to last detail. It was built in Watertown, N. Y., by Bagley & Sewall.

One project recently undertaken at the school was to investigate the possibility of manufacturing newsprint entirely from groundwood, without chemical pulp. This experiment is still in progress.

Head of the school is Gaston Francoeur, B.L., T.D.P., with a staff of ten.

KVP Papers From "Cradle to Grave"

A most informative and attractive little illustrated booklet, "How Paper is Made at KVP," is now being passed out to visitors at KVP's Parchment, Mich., mill, described on its back cover as "The World's Model Paper Mill."

A brief history of papermaking, brief descriptions of how pulp and paper are made, with illustrated flow sheets for both processes, etc., are features.

Incidentally, one punch line is that KVP makes papers for daily use "from cradle to grave"—starting with the KVP Obstetrical Sheets and ending up with a KVP Embalmer's Sheet.

mill safety, retirement plan and other company topics.

Results of the survey were published this summer in a special insert in the company publication, "The Nepco Digest." This report included a management comment section which explained the significance of the subjects covered in the survey and stated the company's aim to increase the effectiveness of informational channels to employees.

In general, results of the survey followed the pattern set by similar surveys conducted by other companies and research organizations. A large percentage of employees indicated a lack of understanding of the profit relationship as well as operating problems found in running a business.

In addition to furnishing a guide for management-employee communications, the survey is providing helpful material for foremen discussion groups.

Hercules Pilot Plant For Western Wood Products

Hercules Powder Co., of Wilmington, Del., is constructing a pilot plant at Klamath Falls, Ore., for the study of the chemistry of western woods on a 50-acre site purchased from Weyerhaeuser Timber Co.

"We believe the western woods contain a number of interesting organic chemicals in relation to our fields," an official of the company said. "Certain processing of the wood is necessary before research on their chemical contents can be pursued properly."

Hercules has had considerable experience and success in the extraction of chemicals from pine wood in the South-eastern states and obtains its naval stores products from that area. What it expects to find, and to what extent as to market, in the Pacific Northwest the company is not ready to say.

New England Pollution Studied by U. S. Board

If any mill executive in New England has been dubious about the continuation of interest in stream pollution in view of the long-term emergency, he was no longer in doubt in December.

The Federal Water Pollution Control Board, appointed by the President, had held hearings in Boston and finished up its tour of inland and coastal waters of New England. The verdict, as expressed by a board member, L. A. Danse: "There should be no slowing down of pollution abatement programs because of war effort."

New Supercalender for Badger Paper Mills, Inc.

A new 72-inch Appleton Machine Co. supercalender which will produce a double finish on waxed paper at pushbutton-controlled speeds up to 1600 feet per minute, with a threading speed of 50 feet per minute, will be installed at the Peshtigo, Wis., mill of the Badger Paper Mills, Inc.

Westinghouse is supplying the drive and a motorized wind-up stand. A Westinghouse booster generator provides "inch" operation of this section, stalled tension, IR drop compensation and inertia compensation. A Rototrol rotating regulator is used as a constant horsepower regulator.

NATIONAL SAFETY WINNERS

In the National Safety Council's 1950 safety contest in which there were 374 contestant mills and converting plants in this industry at the start, finally, 400, the winners have been announced.

Winners among pulp and paper mills, in groups A to D, according to size, were:

Group A:

First—Wood Conversion Co., Cloquet, Minn.

Second—Longview Fibre Co., Longview, Wash.

Third—Champion Paper & Fibre Co., Hamilton, O.

Group B—

First—Crown Zellerbach Corp., Port Townsend, Wash.

Second—Marinette Paper Co., Marinette, Wis.

Third—Quebec North Shore Co., Baie Comeau, Quebec.

Group C—

First—West Virginia Pulp & Paper Co., Williamsburg Mill.

Second—Mead Corp., Heald Division.

Third—St. Anne Paper Co., Beaupre, Canada.

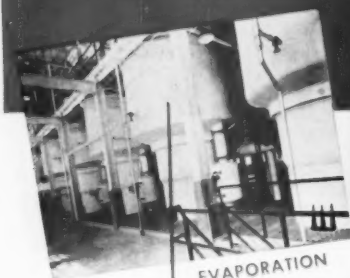
A group of 16 were tied for first in group D: Certaineed Products plants at Marseilles, Ill.; York, Pa.; Savannah, Ga.; and East St. Louis; Philip Carey Co., Lennoxville, Que.; U. S. Gypsum Co., Oakmont, Pa.; Fry Roof, Brookville, Ind.; Armstrong Cork Co., Pensacola, Fla.; National Gypsum Co., Kalamazoo, Mich.; U.S. Gypsum Co., N. Kansas City; Amer. Writing Paper, Nonotuck Div. and Mt. Tom Div., Holyoke, Mass.; Mead Corp., Nashville, Tenn.; Johns-Manville, Tilton, N. H.; Kimberly-Clark Corp., Kapuskasing, Ont.; Spaulding Fibre Co., Hayes Plant, N. Rochester, N. H.

In converting plant groups, Stone Container of Chicago was first in A; Canadian Cellucotton at Niagara Falls, Ont., and Hankins Container at Union, N. J., were first in B, and 15 plants were tied at top of C.

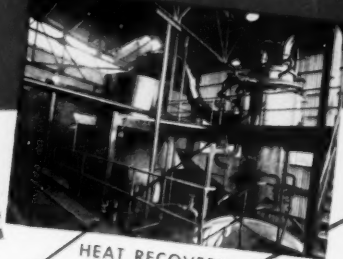
Ziel Comments On Port Townsend Victory

Resident Manager F. L. Ziel, in commenting on the award the Group B first place National Safety Council to Crown Zellerbach Corp., Port Townsend, Wash., said "the accelerated labor-management safety improvement teamwork of the past five years has produced some splendid results. In those five years 826 fewer Crown Zellerbach employees suffered lost-time accidents on the job than would have, had no improvement over the 1945 frequencies been accomplished. At our plant in Port Townsend, 153 employees were spared pain, injury, loss of pay and family worry in the past five years."

Here Swenson Can Help You ...



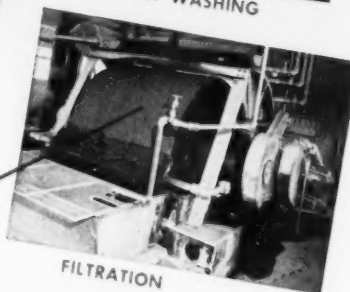
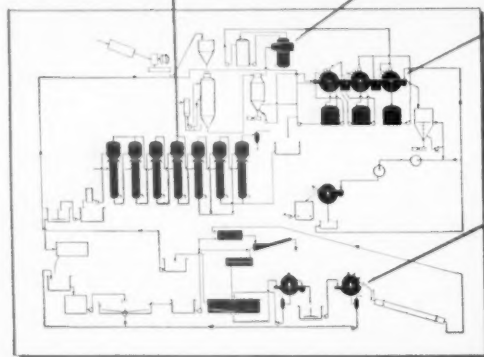
EVAPORATION



HEAT RECOVERY



PULP WASHING



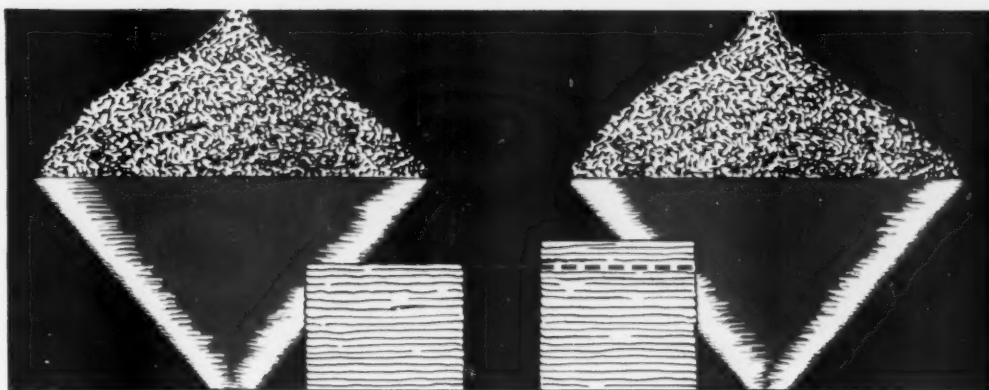
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More and more mills making kraft, sulphite, and semi-chemical pulps are improving their competitive position in the industry by installing Sutherland High Yield Systems. In addition to guaranteeing a 20% increase in yield, these new techniques provide other substantial savings in chemicals, power, and steam. At present prices, the total savings amount to about \$6.00 per ton of pulp, and this

figure will increase with the rising trend of the market.

It's going to be harder and harder for mills to show a profit if they use "Model T" pulping methods. You can improve your pulps and your profits with the streamlined Sutherland High Yield System. Let us tell you how. Write for further information, mentioning the kind of pulp you're interested in.

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Designed, Engineered, Serviced

continuous beating systems

by SUTHERLAND REFINER CORPORATION

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EVANS (Continued from Page 52)

yardage of paper from the same tonnage of pulp or alternatively the same yardage from a reduced tonnage. Some integrated mills might then be in a position to supply excess pulp production to the market. This measure might well be accompanied by a ban on excessive or unnecessary uses of paper such as other industries have accepted where critical materials are involved.

Secondly, if we are going to be 15% short of market pulp in 1951, is it not better to try to spread this shortage in such a way that no one consumer is too badly hurt? . . . I would like to see the government pass an order restricting each mill's market pulp consumption to let us say 90% of its 1950 usage. If this were accompanied by inventory restrictions and the proper cooperation between pulp producers, pulp consumers and the government, it would have the effect of equalizing market wood pulp supply and demand in a manner which I consider far preferable to complete laissez-faire, or to the strangle hold of pulp allocation which a laissez-faire policy may produce. Since market pulp consumption is going to be reduced at least 10% anyway, and quite possibly 15%, this proposal is realistic recognition of the existing situation.

Thirdly, I believe that the market pulp producers have as great a stake in avoiding pulp allocation as their customers. To the extent that market pulp mills have contributed to the present situation through some violent alteration in their sales pattern, I urge that they put aside whatever motives they may have had and readjust their deliveries so as to give all their customers as nearly as possible the same proportion of their deliveries as in 1950. The same thing can be accomplished by directive from Washington, but when we requested and succeeded in having wood pulp removed from the commodities to which D. O. Orders are extendable, we undertook a responsibility for self-policing to which the market pulp mills must lend their sincere efforts.

Fourthly, I appeal to the integrated mills to awaken to the realization that in the long run they have the most to lose by a policy of pulp allocation and control of end uses. It seems incredible to me that the 6th or 7th largest industry in the U.S. would let itself be embraced by the hydra of pulp allocation for a 3% shortage (400,000 tons) in the over-all supply of wood pulp. Integrated mills do not want to sell pulp in times like these. We know that their customers are clamoring for paper and paperboard. Yet statesmanlike action by a few of the larger companies, which would affect a very small proportion of their total production, might be the means of staving off controls that the industry would rue for many a year to come.

These are only one man's views. Many of our directors and members hold opinions that differ in varying degrees. The association hopes to develop constructive policies which will best serve the unselfish interests of its members, the industry as a whole, and our government.



PHOTOGRAPHED AT AMERICAN PULP CONSUMERS annual luncheon during Paper Week by PULP & PAPER (l to r): WILLIAM BECKETT, retiring President of American Pulp Consumers Association, who had seen tremendous growth in breadth and interest of that group; L. KEVILLE LARSON, of Weyerhaeuser's Pulp Division, who stated case against premature controls and allocations; KARL CLAUSON, Secretary of the Consumers group, listens in preparation for his trip to Sweden, having left a week later.

MARKET PULP -- REVIEW AND FORECAST

A review and forecast of U.S. market pulp at Paper Week by Karl A. Clauson, executive secretary of the Association of Pulp Consumers Inc., called 1950 the "best single year the non-integrated mills have enjoyed in 20 years."

Predicted an excess demand in 1951 and further reduction of available supply by government control, nitrating demands, sulfur shortage and "the talked-about international allocation of raw materials."

Called "the year 1950 probably the last year of the relatively free enterprise system under the modified capitalistic economy which we have known during the past half century . . . the future is so uncertain as to make any intelligent forecast virtually impossible."

He reported census figures showing market pulp for U.S. paper and board mills totaled:

From	Short Tons	Pct.
U. S. mills	1,180,000	41
Canadian	970,000	34
Scandinavian	720,000	25
Total	2,870,000	100

Canada set a record with a new market kraft mill coming in. All chemical bleached grades set new records.

Inventories fluctuated less than in any other year since the war. But gradually went down since July and probably will continue downward well into 1951. Prices strengthened in all grades.

Domestic bleached sulfite showed most restrained contract increases rising only 14% from \$118 to \$135 delivered in first quarters of 1950 and 1951. Scandinavian unbleached sulfate was "most volatile"—rising 113% from \$82.50 delivered to \$162.50, on dock, first quarters of 1950 and 1951 respectively.

This interesting table presented by Mr. Clauson shows about 155 integrated mills (making 90% of pulp) used 268,000 tons of market wood pulp; about 80 semi-integrated, making less than 90% of needs but some used 913,000 tons; and about 305 non-integrated mills used 1,719,000 tons but made 6,500,000 tons of end products by use of secondary fibers with wood pulp). A total of 130 such mills used no wood pulp. Here is his table:

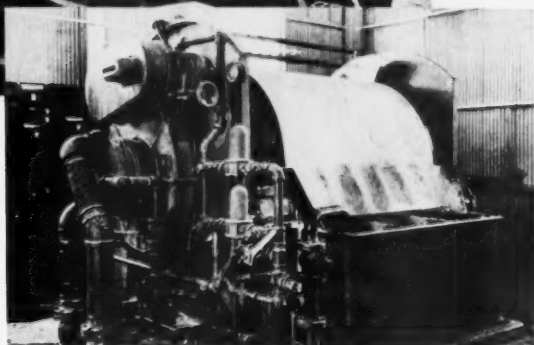
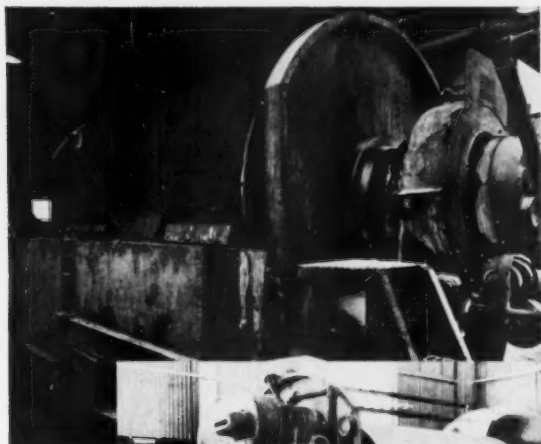
MARKET PULP CONSUMPTION IN U.S. PAPER AND BOARD MILLS, 1950 (In Short Tons)

	Integrated	Semi-Integrated	Non-Integrated	Total
Sulfite	68,000	465,000	956,000	1,489,000
Bleached	38,000	243,000	596,000	877,000
Unbleached	30,000	222,000	360,000	612,000
Sulfate	125,000	346,000	498,000	969,000
Bleached	70,000	121,000	206,000	397,000
Semi-Bleached	5,000	10,000	15,000	30,000
Unbleached	50,000	215,000	277,000	542,000
Soda	19,000	18,000	80,000	117,000
Other	56,000	84,000	185,000	325,000
Total	268,000	913,000	1,719,000	2,900,000

Source: Bureau of Census. Month of December estimated.

OLIVER LIME MUD FILTER

The chemical filter designed to do a **chemical** filtering job



Study these two installation pictures of Oliver Filters. One is handling lime mud in a southeastern kraft mill; the other is handling potash in a west coast chemical plant. Note the similarity of design. Materials of construction will vary, of course, to meet specific conditions. But both are distinctly Oliver "Chemical" Filters.



As for "experience", we can point to nearly a hundred Oliver Lime Mud Filter installations in pulp and paper mills as well as to several thousand Oliver "Chemical" Filters in industry generally. Yes, there's plenty of "chemical" filtering experience back of the Oliver Lime Mud Filter you are planning to buy. Plenty of that necessary chemical filtering "know-how."

OLIVER UNITED FILTERS



INC.

New York 18, N. Y.
33 West 42nd Street

Chicago 1, Ill.
221 N. LaSalle Street

Western Sales Div:
Oakland 1, Calif.
2900 Glascock Street
San Francisco 11, California

Sales & Manufacturing Representative:
E. Long Limited, Orillia, Ont., Canada

Factories: Oakland, Calif. • Hazleton, Pa. • Orillia, Ont., Canada • Melbourne, Australia

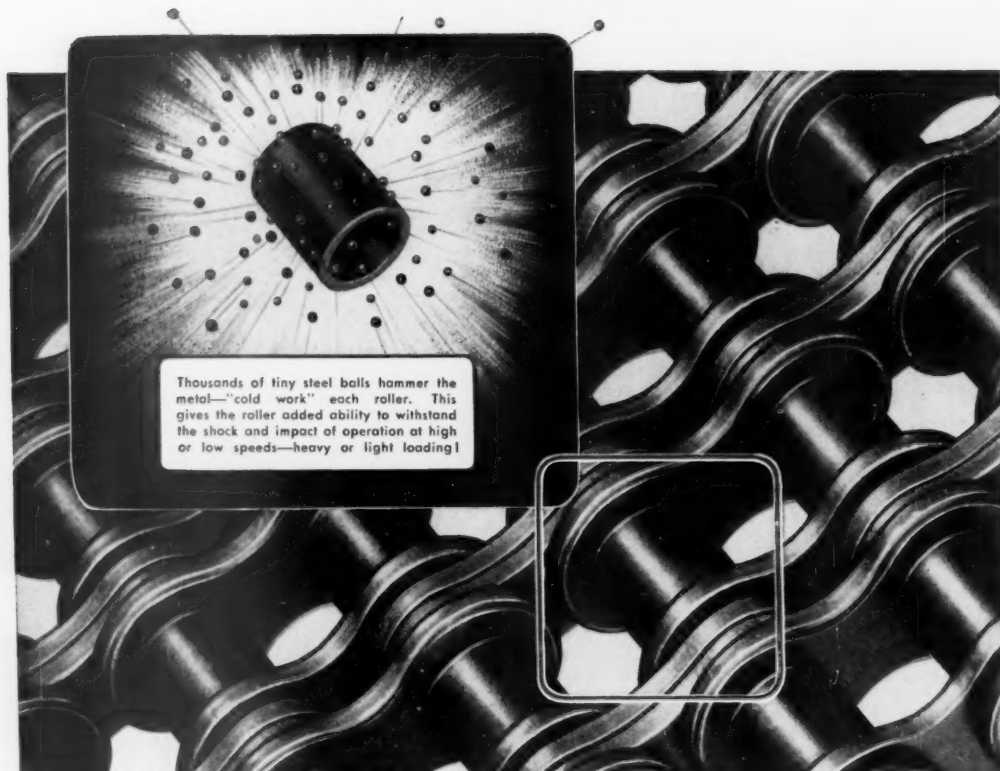
APRIL 1951

109

Get the roller chain with rollers that are

SHOT PEENED

for EXTRA fatigue life!



You get this added feature in every LINK-BELT Roller Chain

You get absolute uniformity, too. No highs. No lows. Just smooth, flowing dependable chains that pay off in wide flexibility—greater performance—longer life.

You see, LINK-BELT Roller Chains are made from carefully selected materials with controlled heat treatment to assure uniformity and absence of weak members, then—rollers are shot peened to

give them the extra fatigue life needed for today's higher speeds and heavier loads.

Link-Belt Roller Chain is available in single or multiple widths, in $\frac{3}{8}$ " to 3" pitch and double pitch. If you have a roller chain problem, see the LINK-BELT engineer nearest you.

LINK-BELT

ROLLER CHAINS and SPROCKETS

LINK-BELT COMPANY. Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Johannesburg. Offices, Factory Branch Stores and Distributors in principal cities. 12,227

Personals

From the Canadian Industry

RALPH G. JOHNSTONE, former manager of manufacturing for the E. B. Eddy Co., Hull, Que., has been appointed vice president and general manager, St. Raymond Paper Ltd., which operates a 50 ton newsprint mill at St. Raymond, Que., and a 100 ton unbleached sulfite mill at Desbiens, Que. **JEAN BLAIS** is president. **DOUGLAS W. AMBRIDGE**, president of Abitibi Power & Paper Co., Toronto, has been named to an advisory committee to Ontario's Minister of Lands and Forests.

C. B. DAVIS, manager of woodlands, Abitibi Power & Paper Co., and **MAL-**

ROY FOOTE, manager Powell River Sales Co., returned to his Vancouver office in February after a vacation in Hawaii.

SYDNEY HANSEL, head of Hansel Engineering Co., Vancouver and Seattle, has been making a tour of Scandinavian pulp and paper mills looking for ideas to incorporate in his hydraulic debarking units.

J. C. NUTTER, formerly in charge of pulp and paper machine division, John Inglis Co., Toronto, has been appointed chief engineer of Gair Co. of Canada, where he was employed several years ago.

DAVID H. ROSS, of Winnipeg, has been named vice president and director of Gair Co. of Canada, manufacturers of paper products. He has been in charge of the Gair subsidiary in Manitoba—Dominion Envelope & Cartons (Western) Ltd.

CHARLES W. STEPHENS has been appointed general manager of Dominion Paper Box Co., Toronto.

ROBERT J. FILBERG, vice president of Canadian Western Lumber Co., which with Pacific Mills is building a newsprint mill at Duncan Bay, Vancouver Island (Elk Falls Co.), returned recently from a winter vacation in Honolulu.

J. T. CHRISTIANSEN, Swedish-born former executive of Finnish pulp mills, who designed the kraft mill for N. Z. Forest Products at Kinleith, New Zealand, has been appointed pulp and paper mills superintendent for that company.

A. R. BARLOW, for several years with the engineering staff of the Bowater group in the United Kingdom, has been made resident engineer for N. Z. Forest Products, Ltd., at Kinleith, New Zealand.

EIGHTEEN MONTHS with the kraft pulp mill of Bloedel, Stewart & Welch at Port Alberni, B. C., were a part of the training for **DONALD L. STACEY**, who has returned to N. Z. Forest Products, Ltd., in New Zealand, to become manager of the pulp mill at Kinleith, near Tokorua.

HENRY OSTROWSKI, former technical supervisor, Pacific Mills, at Ocean Falls, B.C., is now with the technical staff of Brown Corp., La Tuque, Que.

HON. EARL ROWE, president of Great Lakes Paper Co., Fort William, Ont., claims a new newsprint production record for his mill—507 tons on two machines in one day.

MRS. J. B. ROWE AND MRS. JEANETTE WILSON, president and superintendent, respectively, of the oldest—and, incidentally, the smallest—privately-owned pulp mill in Canada, at Thorold, Ont., were among delegates to the meeting of the Canadian Pulp and Paper Association in Montreal.

A. F. DOWNER, of Wellington, New Zealand, has been elected to the board of directors of N. Z. Forest Products, Ltd., now engaged in extensive construction of pulp and paper mills at Kinleith, near Tokorua.

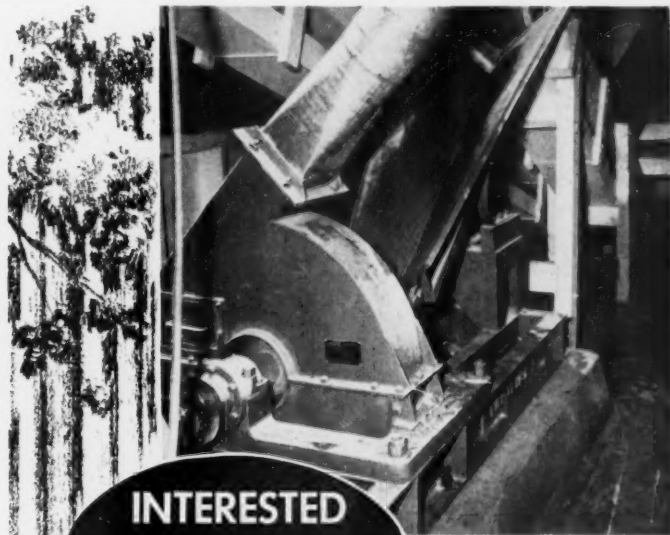
COLM COCHRAN, Hammermill Paper Co., are vice president and executive member, respectively, of Ontario Forest Industries which held its annual meeting in Toronto recently. **C. R. MILLS** is manager. **HON. EARL ROWE**, president, Great Lakes Paper Co., is retiring president.

N. S. GRANT, of the Spruce Falls-Kimberly Clark organization at Kapuskasing, Ont., is the chairman of a newly organized section of the Canadian Pulp and Paper Association, with **L. CUNNINGHAM**, **G. FERRIER** and **W. HALL** representing the same group on the executive. **N. C. COWIE** of Iroquois Falls division, Abitibi Power & Paper Co., is vice chairman, with **R. M. OWEN**, also of Iroquois Falls on the executive. **V. OLESKOWICH** of Smooth Rock Falls division, Abitibi, is treasurer, with **R. LITCHFIELD** of the same division, a member of the executive.

WANTED

Paper, any and all types job lots, obsolete, damaged, misprints, etc. Also steel strapping and seals, etc.

G. B. Goldman Paper Co., Dept. "T"
316 N. 3rd St., Phila. 6, Pa.



INTERESTED IN BETTER CHIP RECOVERY?

If you are dissatisfied with the chip-recovery from cards and slivers in your operation, consider the **SUMNER Re-Chipper**.

The first model of this newly-developed Re-Chipper has been giving satisfactory service for over a year at the Crown-Zellerbach plant in Camas. Another model, illustrated, is now at work for Potlatch Forests of Lewiston, Idaho. The third is to be installed at the Colonial Sugar Refining Company plant in Australia.

We suggest that if you are considering the installation of a Re-Chipper in your plant, or a replacement, that you contact us.

Detailed information on all **SUMNER** equipment will be gladly furnished on request.



THIS IS NO TIME TO SUBSTITUTE "EXPERIMENT" FOR "EXPERIENCE"

Stebbins "Know-how" is based on sixty-seven years of designing, installing and maintaining corrosion-resistant linings, stock chests and other chemical process vessels.

SULPHITE MILL

Sulphur burner linings
Combustion chamber linings
Acid tower linings
Acid storage tanks
Settling tank linings
Calcium digester linings
Soluble base digester linings
Bleach plant tanks and linings

PAPER MILL

Special process chests
Stock storage chests
Wire and couch pit linings

KRAFT or SEMI-CHEMICAL MILL

Combustion chamber linings
Absorption tower linings
Bleach plant chests and linings
Digester linings

CHEMICAL PLANTS

Acid and alkali storage tanks
Pickling tanks
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When you run into a problem in any of the above, drop us a line. There is no substitute for "Know-how" based on years of experience.

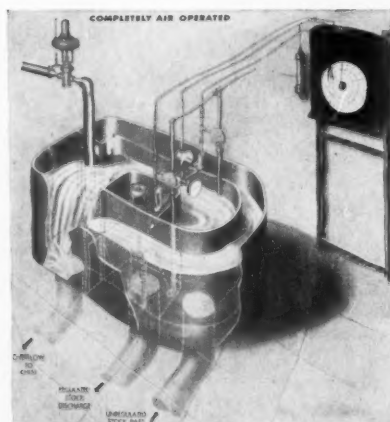


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DEPENDABLE PERFORMANCE ALWAYS!



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BRAMMER *recording consistency control*

The unique operating principle of the Brammer as a non-mechanical Regulator, completely air operated, assures constant, dependable performance always.

The Brammer functions because of a variation in the slope of the stock, caused by changes in the internal friction of the stock suspension, which is directly related to consistency changes.

With no moving parts in the stock, and no interference of flow from mechanical friction, maintenance is practically eliminated, and no lubrication is required except on diluting water valve stem.

Catalog upon request.

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PAPER and INDUSTRIAL APPLIANCES INC.
122 EAST 42nd STREET • NEW YORK 17, N. Y.

PAPER WEEK (Tappi)

(Continued from Page 100)

and from both commercial and pilot woods operations.

Called "peeler" and from the layman's viewpoint using a modification of the peeling or rossing principle, this appears to justify the alternate cognomen of "barker" and fits into the new theme of barking at the point of cutting, thus allowing haulage advantages as well as making use of bark as fertilizer in the woods.

Wet Strength Papers

As in the last world crisis, more than usual attention was given to wet strength processes, the sessions on which this year were chairmanned by K. W. Britt, Scott Paper Co., Chester, Pa. Armies and production for war require wet strength in great tonnage, and indeed, the last war was the cradle of modern wet strength developments. Fittingly, one of the pioneers in wet strength resins, American Cyanamid Co., furnished three of the speakers who collaborated on a study of factors affecting retention and efficiency of those special resins. The Cyanamid trio were C. S. Maxwell, R. R. House and W. F. Reynolds.

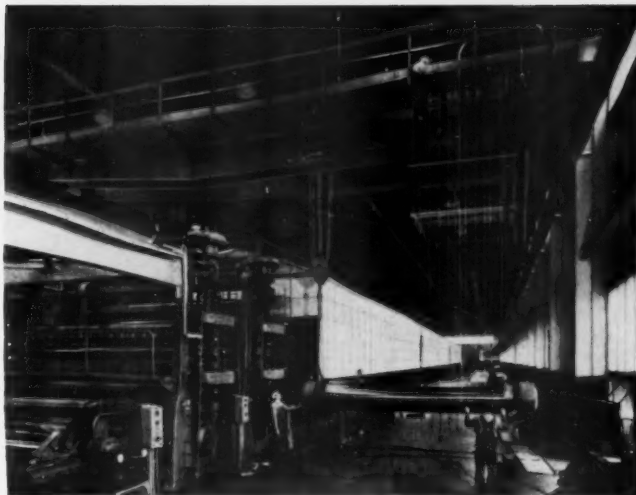
Another outstanding paper in these sessions was the polyethylenimine study by Paul E. Trout, who wrote his paper from studies on the staff of the Institute at Appleton, Wis., but who now is devoting his talents to problems of American Box Board Co. at Filer City, Mich.

Corrosion Discussed

Led off by a description of the University of Maine's industrial lecture program, in a paper by Lyle C. Jeness of that institution, the Chemical Engineering session focused on corrosion and therefore the choice of J. R. Lientz of Union Bag as chairman was appropriate, for that mill has been progressing swiftly in the experimentation and use of non-corrosive materials. The speakers at this session offered able men and top outfits all along the line in this ever-more important subject. They were Beaumont Thomas, Stebbins Engineering; R. A. Heusby and M. A. Schell, of A. O. Smith Corp.; Messrs. Hair and Duskin of Crossett Paper Mills; H. O. Teeple of International Nickel; and Messrs. Smith and Atwood of St. Anne's Mill in Bristol, England, read by title.

Unusual Instrumentation

Unusual instrumentation was one of the stories behind the paper describing the peroxide bleaching plant recently put in by Gould Paper Co. This groundwood and sulfite operation, as related by R. A. Premo of the mill, has an extremely modern Brown Co. instrumentation at the heart of Gould's bleaching of both mechanical and sulfite pulps.



CUSTOM-BUILT for a special job requirement

To allow for a future plant expansion which would about double the width of the machine room, EDERER designed and built what is literally a "half crane." When the machine room is enlarged, the crane girders can be easily lengthened without change of speed or capacity. It is this custom-building to exact job requirements that has made EDERER equipment the first choice of pulp and paper plants throughout the West. An EDERER engineer will be glad to talk with you about the job requirements of your plant.

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Builders
to the
Pulp and Paper
Industry



EXPORT DIVISION
311 CLAY STREET
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Stand-by Cranes • High Lift Cranes • Calendar Cranes • Reel Cranes • Monorail Hoists

Personals

NOTES FROM THE SOUTH

HENRY S. RAY, formerly of industrial engineering staff, has been appointed general foreman of the finishing department of the box plant, Union Bag & Paper Corp., Savannah, Ga., according to **O. C. FENTRESS**, box division manager.

C. N. ROGERS, of Sonoco Products Co.'s engineering department, spent part of the winter in Mexico in connection with company plans to erect a plant there in 1951. Company headquarters are in Hartsville, S.C.

W. H. BAILEY, personnel director for Sonoco Products Co., Hartsville, S.C., was elected president of the Charlotte (N.C.) Personnel Directors Assn.

Bemis Plant at Vancouver

The caption with view of Bemis Paper Bag Co.'s modern multi-wall bag factory in March erroneously stated it was at St. Helens, Ore. It should have said Vancouver, Wash., a short distance east.

MEAD CORP.'S MILL at Kingsport, Tenn., is now accepting fire cherry pulpwood (*Prunus pennsylvanica*) for the first time.

FRANCIS COOK, formerly an area forester for the Southern Pulpwood Conservation Assn., has become a "dealer" at Salisbury, N.C. He ships to Champion at Canton, N.C.

JAMES E. LAVELY has become area forester for the Southern Pulpwood Conservation Assn., with headquarters at Concord, N.C. He succeeds **Francis Cook**.

ELMER PARKS has been named conservation forester for International Paper Co. in Arkansas. He succeeds **Rex Carey**.

AL DAVENPORT has become conservation forester for Union Bag and Paper Corp., with headquarters at Swainsboro, Ga. His predecessor, **Fred Thrash**, was injured in an automobile accident.

Another Chapter In RFC Story Involves Mill



In all the fantastic evidence turned up in Washington, D.C., lately, linking payment for a secretary's fur coat and other events with the affairs of the Reconstruction Finance Corp., one of the Southern pulp and paper industry's well known

leaders, **Reuben E. Hartman** (shown in picture), came forth with a statement that didn't get as big headlines as the fur coat deal but stirred things up a bit in Alabama.

Mr. Hartman, it will be recalled, was former president of Mobile Paper Co. He charged the RFC and Alabama Congressman **Frank Boykin** squeezed him out of control of this company, forcing him to "turn over 40% interest in stock in the company for next to nothing" in order to obtain a \$750,000 RFC loan, and now he has "nothing to show for it."

Mr. Hartman said three sons of Rep. Boykin obtained the property and one became an officer (but is no longer one). Rep. Boykin denied any "squeeze play" and said the stock his family got is now worthless.

As we reported last month, the Mobile mill is now Stone-Mann Paper Co., jointly owned by Seaboard Container and Stone Container Corps., and one of the Boykin sons, **James Robert Boykin**, is manager, but has no interest in it other than \$218,000 held in notes.



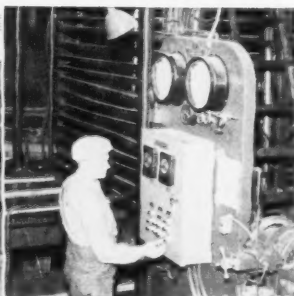
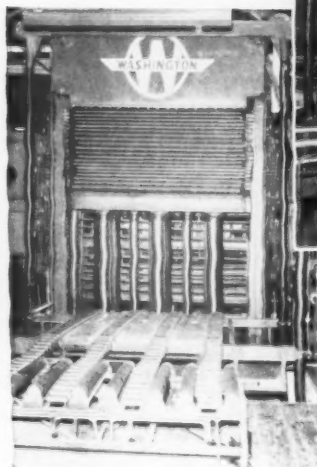
John Price, Superintendent of Stone-Mann Paper Co., Mobile, Ala., celebrated his 25th year with the mill on Feb. 1. He started with Tennessee Paper Mill, Chattanooga, Tenn., 27 years ago and went to the Mobile Paper Mill as back-

tender in 1926. The Mobile mill was recently acquired by Stone-Mann from Mobile Paper Mill Co.

South Pattern of Wage Increases

Following the pattern established at other plants in the South, a 4-percent wage increase with a minimum of 5 cents per hour was negotiated by management and AFL unions at Brown Paper Mills Co., Brown Paper Industries, Bancroft Bag Co., Terminal Bag Co. and Negley Bag & Paper Co., all in West Monroe, La. The same increase was negotiated at Gaylord Container Corp., Bogalusa, La., and at three plants of International Paper Co.—the Single Service Division at Bastrop, La., and the bag plants at Bastrop, La., and Camden, Ark.

NEW WASHINGTON HOT PRESS FORMS PLASTIC-FACED PLYWOOD



Above: Press is loaded, ready to start another automatically timed and pressure-controlled cycle.

Right: View from loading side with panels being subjected to heat and pressure. Six 12" hydraulic cylinders exert total "push" of 850 tons.

Production of plastic-faced "Armoron" plywood panels was recently begun by Anacortes Veneer, Inc., Anacortes, Wash., using the new hot plate press shown above. The 850-ton press was designed and manufactured by Washington Iron Works to specifications requiring especially close tolerances, long life, and fast, automatic operation.

OTHER WASHINGTON PRODUCTS engineered for maximum production efficiency include "Trakloader," and other logging equipment, hydraulic barkers, pulp baling presses and paper dryers.



Since 1882

WASHINGTON IRON WORKS

1500 6th Avenue South

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Personals

Pacific Coast

OAKLEY DEXTER, a 35-year veteran with Crown Zellerbach Corp., and an assistant vice president, has been appointed senior officer of the Seattle division of the corporation, coincident with the move of Vice President D. S. Denman to San Francisco headquarters as a member of the firm's executive committee.

B. P. ALTICK was appointed vice president of Fibreboard Products, Inc., at the regular meeting of directors, Feb. 28, according to T. N. Bland, president. Mr. Altick has been active in mills, plants and sales of Fibreboard more than 25 years. During World War II he was director of the Containers Division of the War Production Board, and until transfer to Fibreboard headquarters as assistant to the president, in Jan., 1950, was vice president and general manager of Federal Container Co. at Philadelphia, a subsidiary.

RUSSELL J. LeROUX, pulp mill manager, Weyerhaeuser Timber Co., Everett, Wash., received a warm tribute of appreciation after completing his year recently as president of the chamber of commerce in that city.

JESS BONNAR, pulp mill, Fibreboard, Port Angeles, has a ranch across Puget Sound at Stanwood, Wash., and recently took his vacation there.

LEE E. HILL, plant engineer, Pulp Div., Weyerhaeuser Timber Co., Everett, Wash., chosen to represent the West on a national industry committee to find ways and means of conserving critical metals, did his usual thorough-going job by visiting many of the western mills to find out first-hand about their problems, before going to the committee sessions in the East.

ROBERT W. "BOB" STEVENS, paper mill consultant, Los Angeles, left in early March for Hull, Quebec, Canada, to make a survey of the board mill at E. V. Eddy Co., and recommendations to increase production.

ROBERT H. HEUER, shift superintendent, Pulp Division, Weyerhaeuser Timber Co., Longview, Wash., is on leave because of illness.

JACK V. SAVAGE, sulfite mill superintendent, Crown Zellerbach Corp., Camas, Wash., has, with wife and son Kirk, moved into their newly constructed home at 1235 N.E. 6th Street.

J. E. FERGUSON, assistant western division parts manager for Caterpillar Tractor Co. since December, 1949, has been promoted to western division parts manager, with headquarters at San Leandro, Calif.

E. A. PAUL, personnel supervisor of Crown Zellerbach Corp., Camas, Wash., attended two separate meetings of American Management Association in Chicago—a personnel conference Feb. 26-28, and Workshop Seminar the first of March.

GEORGE CROPPER, manager of the Rayonier mill at Shelton, Wash., and his

wife, Kate, have their only two children now in service—his son Don in the army at Fort Ord, Calif., and son Fred in navy at San Diego.

KARL A. OBBEREICH, veteran sales executive and representative of Appleton Woolen Mills, Appleton, Wis., accompanied by the firm's Pacific Coast representative, **JACK JOHNSON**, of West Linn, Ore., ran into surprising snow storms in a March tour together of Coast mills.

HAROLD T. FRETZ, assistant to the Industrial Relations Director of Rayonier, Inc., with headquarters in Hoquiam, Wash., and organizer and conductor of training courses for Rayonier mills, has been elected secretary of a new Washington State Training Directory Society, chartered by the American Training Directors Society.

ED McGILL, mill superintendent for Rayonier at Shelton, Wash., and his wife Betty, vacationed in a new resort, Apple Valley, near Victorville, Southern Calif. (reports there were horses to ride); while **LOUIS VAN ARSDALE**, plant engineer at Shelton, and wife Katherine, made a flying trip to Mexico City and Acapulco.

JOHN C. "JAKE" MANNION, a former Hammermill veteran from Erie, Pa., and now paper mill superintendent of its affiliated operation with Rayonier, Inc., in Hoquiam, Wash., fell and chipped a knee bone on r.r. tracks near the mill in December, but was back on the job last month, though not fully recovered. **HILARY OBERT**, assistant paper mill superintendent, carried on while Jake was laid up.

ROBERT'S BURRS

INSURE

Lower Stone Costs

Better Pulp



Pacific Coast Supply Company
PORTLAND, OREGON • SAN FRANCISCO, CALIFORNIA

Personals

Northeast Notes

A. G. PAINE II, secretary of New York and Pennsylvania Co., New York, has been elected vice president of the company in addition to his secretaryship. Other important personnel changes: HARRY E. FOX, JR., is now manager of engineering, and J. ROY GOODLANDER is coordinator of industrial relations.

ROBERT W. LEA, retiring president of Johns-Manville Corp., has joined Olin Industries, Inc., in which company he has been a director since April, 1950. His title has not been announced by JOHN M. OLIN, president of the East Alton, Ill., organization, which has two office organizations in New York and entering the cellophane field with a new mill in connection with and adjacent to Ecusta Pa-

per Corp., Pisgah Forest, N.C.

JOHN DRISCOLL, after a period as an assistant to the general manager for folding cartons following a Gair trainee course, has been appointed manager of the New York office by WRAY H. CALLAGHAN, general sales manager of the folding cartons division of Robert Gair Co., Inc. Mr. Driscoll is a graduate of Harvard, with postgraduate courses on destroyer escorts in World War II.

EDWARD H. PETRICK has been made general sales manager of West Virginia Pulp and Paper Co., succeeding WILEY L. JENNINGS, who is now vice president in charge of sales. Mr. Petrick has been in charge of liner board sales. He came to the New York office from the Covington, Va., mill in 1949, starting there as chemical engineer in recovery.

ARNO W. NICKERSON, wood chemist and consulting engineer, has moved his office from 441 Lexington Ave., New York City, to 34 Cushman Road, White Plains, New York.



W. S. "PAT" YUNKER (left), widely known in instrumentation field of pulp and paper industry, and particularly in the South, has joined Sutherland Refiner Corp., Trenton, N. J., as Sales Representative. Mr. Yunker was with Foxboro Co., in charge of the Southern sales and nationally as assistant to its pulp and paper field sales chief.

N. C. "NATE" MARTIN (right), of Plastics and Resin Div., American Cyanamid Co., New York, has been assigned as a Resin Specialist and Consultant to firms requiring technical assistance in making weather-proof bag seams and fiberboards. Cyanamid has improved resins for war and other packaging. He will assist in use of Cyanamid's new ketonealdehyde resin.



TWO RESIDENT MANAGERS of West Virginia Pulp & Paper Co. mills—JAMES R. SHEA (left), of the Tyrone, Pa., mill, and L. FRANK THOMPSON (right), of the Charleston, S. C., mill—have been elected to the Board of Directors. Mr. Shea's maternal grandfather helped build the Tyrone mill and both his parents worked there. Two of his sons now do. Only last December Mr. Thompson was promoted to Manager at Charleston.

EUGENE HOFFMAN has been elected assistant treasurer of Riegel Carolina, subsidiary of Riegel Paper Corp. Mr. Hoffman is now treasurer of the Howard Paper Mills at Urbana, Ohio. He will continue as an officer of Howard, but for the time being will be located at Riegel's New York office, where he will serve as expeditor of the new pulp mill now under construction at Acme, N.C. Mr. Hoffman was previously associated with the Chemical Bank & Trust Co., New York, as assistant to the president.

GEORGE M. WATSON has been elected to succeed Daniel H. Keck as president of the Salesmen's Association of the Pulp and Paper Industry. David Cheever, Jr., was elected a new vice president, M. A. Vanderheiden, assistant vice president, and H. M. Early assistant vice president. L. Worthington Dodd was named vice president, Eastern Division, and William J. Tilden was re-named vice president, Western Division. The appointments of Eric G. Lagerloef as secretary-treasurer and Miss Anne G. Toomey as assistant secretary-treasurer were announced.

THE "DECULATOR" for DEAERATION

The removal of air from paper stock
ahead of the head box!

Accomplished by the "DECULATOR" - - - a process
developed by Messrs. Clark and Vicario after
numerous years of experimental work.

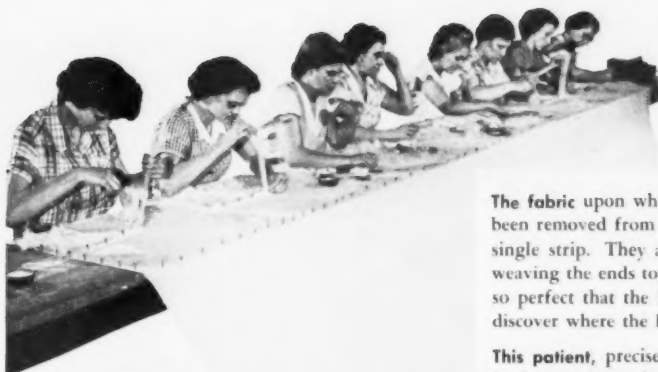
The "DECULATOR" was installed initially
on a full scale paper machine over one
year ago with the cooperation of a
leading Canadian newsprint manu-
facturer.

Newsprint and other grades of
paper stock have now been
successfully deaerated.

The "DECULATOR" is
applicable to either
open or closed head
boxes.



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BRONXVILLE 8, NEW YORK, U. S. A.



they work slow
so that **you** may work fast...

The fabric upon which these women are working has just been removed from the loom on which it was woven in a single strip. They are converting it into an endless belt, weaving the ends together by hand. Their workmanship is so perfect that the keenest examination will be unable to discover where the loom left off and hand weaving began.

This patient, precise, time-consuming method of working is characteristic of every operation in the manufacture of Hamilton Felts, from the selection of the wools to the shrinking, fulling and finishing. It is a tradition, handed down through four generations. It explains why Hamilton Felts run true at all speeds of paper and board machines—why they remove more water—why they leave no felt marks on either side of the sheets.

SHULER & BENNINGHOFFEN, HAMILTON, OHIO

Miami
Woolen
Mills

Hamilton *Felts*

Established
1858

Keep your plant in A-1 condition!

Consult Puget Sound Sheet Metal now on repair, or essential replacement of tanks, fabricated pipe, breechings, hoppers, stacks, and similar equipment.

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Fabricators in all metals, 30 gauge to 1 inch
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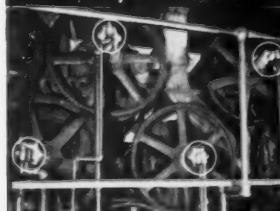
SELF-LUBRICATING

SELF-ADJUSTING

SELF-ALIGNING

Only Johnson Joints offer all these cost-cutting, trouble-saving, production-boosting benefits. Only Johnson Joints end all the shortcomings of old style stuffing boxes, without compromise of any sort. No wonder so many hundreds of mills, and so many machinery manufacturers, have standardized on Johnson Joints. Why not find out how quickly Johnson Joints can pay their own way in your mill.

Johnson Rotary Pressure Joints



Write for catalog showing sizes and styles for all needs.

Installation in a midwestern mill—some of the 562 Johnson Joints purchased by this company.



The JOHNSON CORPORATION, 849 Wood Street, Three Rivers, Michigan

Personals

Midwest Notes

COLA G. PARKER, president and director of Kimberly-Clark Corp., Neenah, Wis., was elected to the board of directors of Carrier Corp. For many years a member of the law firm of Wise, Whitney and Parker in New York City, Mr. Parker became vice president of Kimberly-Clark Corp. in 1937. He has been president since 1942. A graduate of University of Chicago, he first practiced law in Chicago before moving to New York in 1919.

PETER J. MASSEY, well known in the industry as the inventor of the Consolidated process for high press machine coating of printing papers, is back at his Oak Park, Chicago, home after recovery from a six weeks' hospital siege.

ROY HOLDEN, long time manager for Stowe-Woodward, Inc., in the Middle West with base at Kalamazoo, where recently Jack Dickson took over the active representative duties in Roy's place, has been touring the Pacific Coast. Roy and his wife, Jeannette, saw many old friends in the Far West.

HOMER HEEGE, field sales manager of Sutherland Paper Co., Kalamazoo, passed away Feb. 8. Death was due to a coronary ailment. Since 1942 Mr. Heege has been field sales manager. Prior to that



ROY J. SUND (left), Vice President in Charge of Manufacturing for Marathon Corp., with headquarters at Menasha, Wis., and **RUSSELL C. FLOM** (right), Sales Promotion Mgr., also at Menasha, recently rounded out a quarter century with Marathon and received pins from President Wm. Keady. Beginning on sales staff after graduation from Lawrence College, Appleton, Wis., 25 years ago, Mr. Sund transferred to production and was Production Manager of Marathon's converting plants when elected in 1946 to his present post. He has charge of all the company's manufacturing in the U. S., except chemicals. In 1948 he was appointed to the Board of Directors. Mr. Flom also graduated from Lawrence and spent a year at Columbia before joining Marathon in 1925. His experience with the company has included service as Credit Manager and Office Manager, and during last war he was Sales Executive of Marathon's War Products Division. He was named to present position in 1946.

time, from 1931 on, he served in various sales capacities.

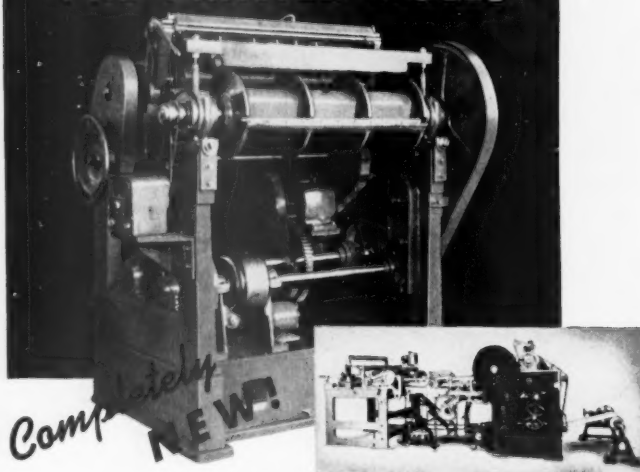
ARTHUR W. VAN HERCKE, director of engineering for the Tractor Division of Allis-Chalmers, has been named vice president of the company in charge of Tractor Division engineering.

E. P. GLEASON, former manager of power has been named manager of outside power and **F. H. COLDWELL**, formerly assistant manager of power, has been named manager of mill power, for Nekoosa-Edwards Paper Co. **JOHN E. ALEXANDER**, president and general manager, announced creation of the two separate departments. Mr. Coldwell is in charge of steam and power systems at Port Edwards and Nekoosa mills, fire protection system of both mills, power production at Centralia hydro-electric plant, mill heating, water filtration and pumping plants. Activities of outside power include Nekoosa-Edwards Light & Power Co., Nepco Lake water supply to both mills, and high lines connecting Centralia, Port Edwards and Nekoosa.

One Gilbert Succeeds Another as President

George M. Gilbert has been elected president of Gilbert Paper Co., Menasha, Wis., succeeding his cousin, A. C. Gilbert, who becomes chairman. The former Gilbert has been with the company since 1921, since 1923 as vice president and treasurer. Theodore M. Gilbert is vice president and A. C. Haselow becomes treasurer as well as secretary. A. Gilbert has always headed the firm since it was founded by their grandfather in William, in 1887.

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London-born "Doc" Southon President of KVP



Alfred Southon (in picture), formerly executive vice president, is the new president of Kalamazoo Vegetable Parchment Co., succeeding the late Ralph A. Hayward, who died Jan. 11. Mr. Southon previously had been named

general manager.

Other officers all re-elected, include John C. Wood, vice president in charge of manufacturing; C. F. Christy, vice president in charge of sales; J. B. Kindleberger, vice president in charge of market and consumer research; Chas. S. Campbell, treasurer; T. W. Peck, secretary and assistant treasurer; and Wm. R. Hess, assistant secretary.

Mr. Southon joined KVP in 1912, when the company was two years old. Hired by late Jacob (Uncle Jake) Kindleberger as "handy man," Mr. Southon kept books, pushed trucks, loaded and unloaded cars, and did many other odd jobs.

Eventually he worked into production scheduling, then into sales, and in 1924 became general sales manager. In 1936 he was elected vice president and a director. In 1947 he became executive vice president.

Born in London, England, he moved to Canada, worked for two years on a tobacco farm, experienced a crop failure, and on hearing of the possibility of a

job in Kalamazoo, landed in town one morning, walked three miles to the plant, and was hired. At the time of hiring, Mr. Kindleberger pointed to a motto on the wall which read, "You are expected to make good, not to make excuses." The motto hangs in Mr. Southon's office today. Uncle Jake tagged him with the nickname "Doc."

As president of KVP, he will also head the company's widely spread interests in the U. S. and Canada, including The KVP Co. Ltd. at Espanola, Ont.; Appleford Paper Products, at Hamilton, Ont. and Montreal; KVP Co. of Texas, at Houston; the KVP branch plant at Devon, Pa.; and Harvey Paper Products Co., Sturgis, Mich.



S. B. APPLEBAUM (left), who joined Cochrane Corp., Philadelphia in 1949, has been promoted to Manager of its Water Treatment Division. For 35 years a specialist in water conditioning, Mr. Applebaum joined Cochrane as Manager of the Cold Process Section of that division.



W. E. MILES (right), Manager of the Industrial Division of The Oliver Corp., Chicago, has been elected Vice President in charge of Crawler Tractor and Industrial Sales for the company, according to A. King McCord, President. Mr. Miles joined the firm in 1919.

Hooker Electrochemical Company Officers



J. Herbert Babcock, was elected a vice president of the Hooker Electrochemical Co., at the annual meeting of the board of directors. The announcement was made by R. L. Murray (shown in picture) who was himself recently elected

president of the company. Mr. Murray appointed Mr. Babcock as vice president in charge of development and research. At the same meeting, Charles H. Winkler was made assistant treasurer of the Hooker company and Thomas F. Willers was made comptroller.

Mr. Babcock started with Hooker in 1916 as a research chemist and was engaged in both production and sales of fine organic chemicals until he became manager of research in 1933. He became manager of development and research in 1943.

Convalesces in Florida

Otto C. Schoenwerk, consulting engineer in construction of a number of mills and mill installations over the years for Weyerhaeuser, Hammernill, KVP and other companies, is convalescing in Coral Gables, Florida, after a recent serious leg operation because of a circulatory ailment. Although forced to be inactive, he is just as keen and interested as ever about industry developments, his friends report.

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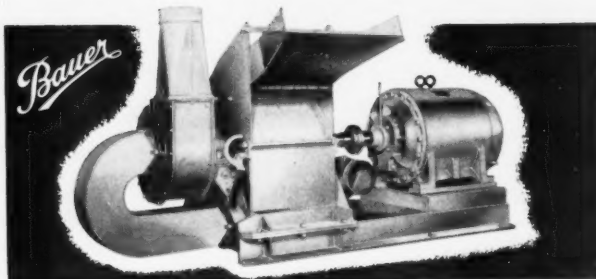
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CHICAGO: F. M. deBeers and Associates, 20 North Wacker

Impact mills for reducing chunky or bulky materials

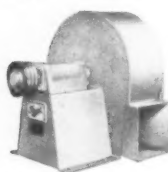
It takes a well designed hammer mill to grind wood edgings, small blocks, pulp lap, agricultural residues, and other materials used in pulp and paper making. That's the kind of mill you see illustrated here—one of the Bauer No. 100 Series Hammer Mills.

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mers and screens are alloy steel.

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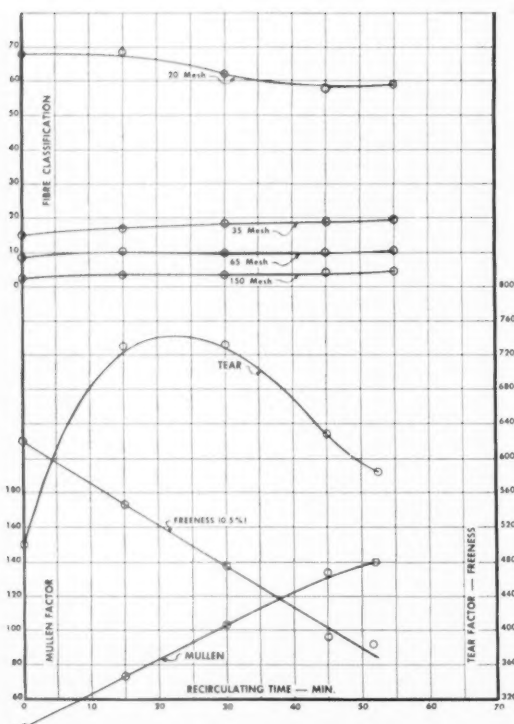
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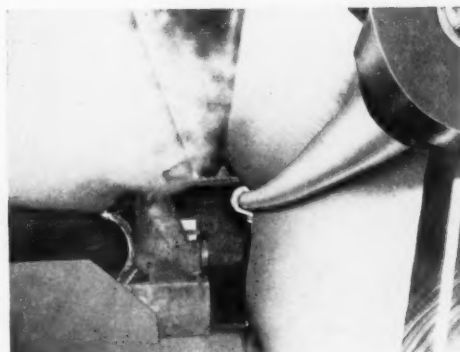
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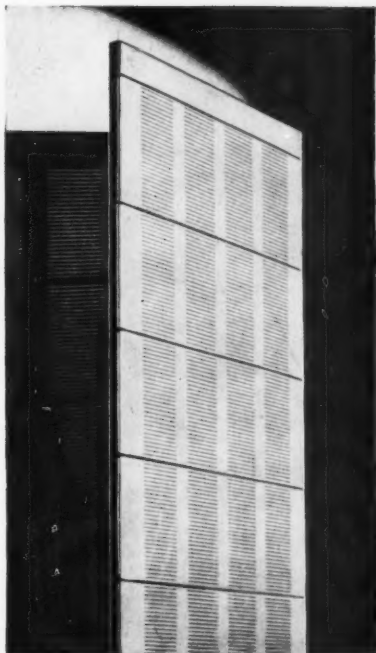
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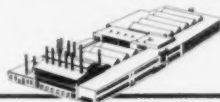
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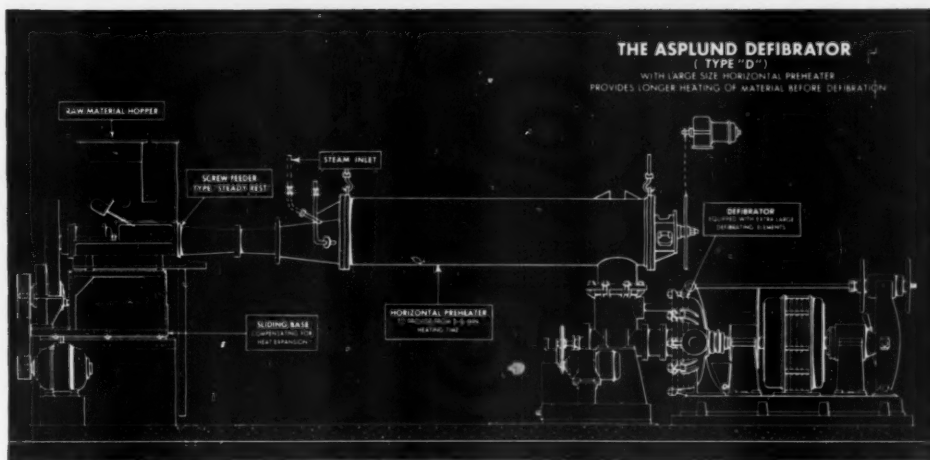
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Figure 5460P
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Figure 5460
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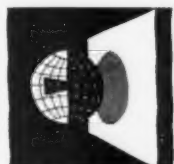
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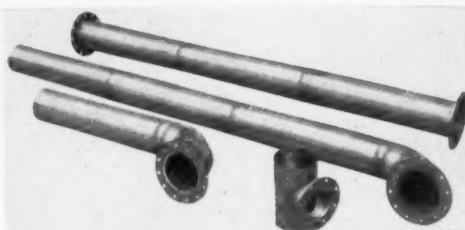
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Just Published

PULP AND PAPER MANUFACTURE

Volume The Preparation and Treatment
One of Wood Pulp

Prepared under the direction of the Joint Committee
on Vocational Education representing the Pulp and Paper Manufacturers
of the United States and Canada

J. NEWELL STEPHENSON, 1043 pages, 6 x 9, 377 Illustrations,
Editor-in-Chief 90 tables, \$10.00

BEGINNING with the fundamentals of the properties and composition of wood, this book takes you through every step in preparation and treatment of wood pulp. It supplies a thorough coverage of everything that happens from the time the wood reaches the mill through the point at which it is turned over to the groundwood mill in the form of barked and cleaned blocks, or is delivered to the chemical-pulp mill in the form of screened chips. It explains all the operations, equipment, theories, data, etc., concerned in the manufacture of mechanical pulp, sulphite pulp, and alkaline-process pulp, up to the time it is ready for delivery. Besides discussing in detail the bleaching of both mechanical and chemical pulp, this volume gives many tests for evaluating the chemical and physical properties of wood pulp.



CONTENTS

1. Structure and Properties of Pulp-wood
Structural, Microscopic, and Physical Properties of Wood
Composition and Chemical Properties of Wood
2. Preparation of Pulpwood
3. Manufacture of Mechanical Pulp
4. Manufacture of Sulphite Pulp
5. Manufacture of Alkaline-process Pulp
General Discussion
Equipment and Operation
6. Treatment of Pulp
7. Bleaching of Wood Pulp
Bleaching of Chemical Pulp
Bleaching of Mechanical Pulp
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- How to estimate the costs of various wood-pulp manufacturing processes
- What equipment is used most effectively for mechanical pulping

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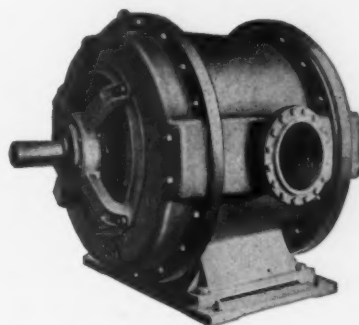
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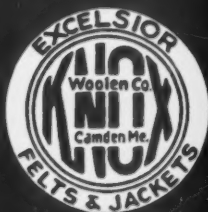
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